

No. 6.— *Notes on the Birds of Rio Frio (near Santa Marta),  
Magdalena, Colombia*

BY P. J. DARLINGTON, JR.

DURING the fourteen months from February, 1928, to April, 1929, I was employed as entomologist in the Colombia Division of the United Fruit Company. Although the chief task in hand was the study of banana insects, holidays and late afternoons were available for recreation. The first claim on my spare time was made by the private collecting of beetles, but after a few months an occasional hour and, more important in the tropics, a little extra energy were found for ornithological work. This was begun in June, when other work had more or less settled into a routine, and was continued, with a few interruptions, until the following April.

It is unnecessary to include here a detailed description of the country, for a complete account with maps and photographs is being prepared and will probably be published in another bulletin of the Museum of Comparative Zoölogy. Briefly, then, my headquarters were at Rio Frio, a small town lying near the middle of a large triangle of flat coastal plain. The apex of the triangle, to the north, is in a semi-arid region at the port of Santa Marta, while the base, to the south, is in humid country near Aracataca and the Fundacion River. The triangle is about fifty miles long. It is bounded on the west by the Caribbean coast and by a large, swampy, saline lake called the Cienaga Grande, and on the east by the Sierra Nevada de Santa Marta. Rio Frio is located in the intermediate country between the northern dry and the southern humid areas, and is, therefore, favorably situated for a study of the birds of both. A good trail leads from the town into the mountains. Large fresh swamps are accessible near Cienaga, and smaller swamps and rivers are numerous. The important details of the plain are shown on the map on page 351. This entire area is a part of the "Santa Marta region" as defined by Todd and Carriker,<sup>1</sup> who give a detailed account of the region as a whole, although their description of the coastal plain is short.

Since there were many different types of habitat near Rio Frio, each with its quota of characteristic and, to me, unknown birds, I began

<sup>1</sup> The Birds of the Santa Marta Region of Colombia: A Study in Altitudinal Distribution. By W. E. Clyde Todd and M. A. Carriker, Jr. *Annals of the Carnegie Museum*, 14, 1922.

by trying to make a census of the species. This involved collecting, for there is no book from which one may hope to recognize the majority of the local birds in the field. Many hours were spent, therefore, in stalking unknown birds with a double-barreled "41" shotgun, trying to learn their characteristics, and then collecting them. It would have been impossible to accomplish anything even in this way, if we had not had a good ice box, by the use of which the skinning of an afternoon's bag could be spread out over two or three evenings. After the first few months the number of birds which it was necessary to shoot decreased steadily, while field notes increased in proportion. Most of the work was confined to the coastal plain, but several visits were paid to the lower hills and two short expeditions were made into the high mountains, although birds were not the primary object at these times. Notes on the few mountain species which were recognized are presented in the proper place.

The total collection numbers 306 skins and includes 237 species. A few other species were shot and identified but for one reason or another (any collector in the tropics will recall many) could not be preserved. The waste of birds was the most objectionable feature of collecting, but the conditions under which the work was done made it sometimes unavoidable. The skins were all shipped to the Museum of Comparative Zoölogy at Cambridge, Massachusetts, where Mr. Outram Bangs has determined most of the species. Some others have been identified by Mr. J. L. Peters, and a few have been compared by myself, usually with Mr. Peters checking my conclusions. The majority of the skins, including all the important records, have been permanently deposited in the Museum of Comparative Zoölogy, the rest

#### Explanation of

Map of the Coastal Plain West of the Sierra Nevada de Santa Marta, Colombia.\*

○ Cities and towns

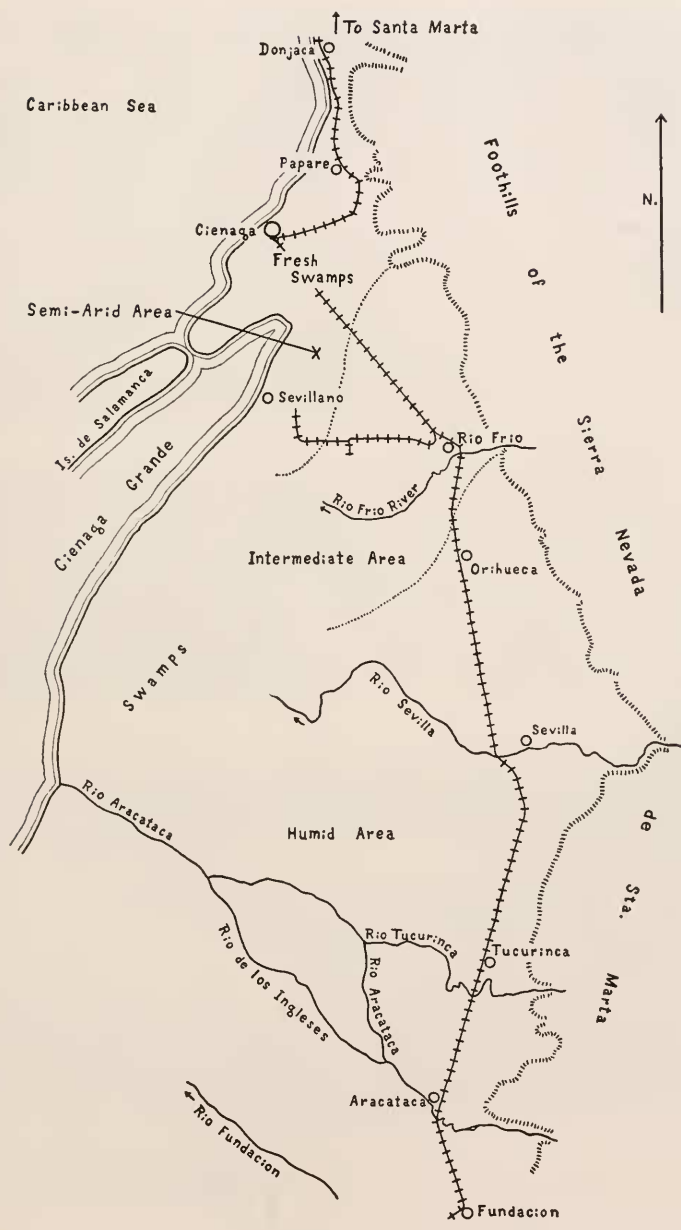
||||| Boundary of the foothills of the Sierra Nevada

----- Approximate boundaries of the "Areas"

+++ Santa Marta Railroad, with all spurs, except one (the Ramal Toblazo, west of Rio Frio), omitted

Scale about 1 — 400,000; about 6.3 miles to the inch

\* I am deeply indebted to the United Fruit Company for permission to base this map on surveys in the Company's possession



are in the Museum of Zoölogy at the University of Michigan, where my friend, Dr. Josselyn Van Tyne, is Assistant Curator of Birds.

The fine volume by Todd and Carriker, already cited, on the Birds of the Santa Marta Region must be the basis for any further studies on the subject, so that it might at first seem unnecessary to publish more than supplementary notes. I have decided to do so, however, for two reasons. The first is because no collections of any size have been made before near Rio Frio, or, indeed, in any part of the interesting intermediate area between the dry and humid parts of the coastal plain, so that this area, while included by Todd and Carriker, is really but little known. The second is because my observations were made in one place for the greater part of a year so that, taken as a whole, they give a more nearly complete picture of the avifauna of a strictly limited tropical locality than is usually obtained or than Todd and Carriker attempt to give.

Acknowledgments are due primarily to Mr. Outram Bangs and Mr. J. L. Peters, ornithologists at the Museum of Comparative Zoölogy, for the identification of material as described above. Mr. Bangs was the first ornithologist to work extensively on the Santa Marta birds, and he has used his wide knowledge of the subject liberally in my behalf. It is impossible to acknowledge in detail the courtesies received from various friends in Colombia, but I must mention the securing of several desirable specimens by Mr. Cornelius Opryshek. I am indebted to Dr. Josselyn Van Tyne for valuable suggestions on many parts of the paper.

It is proper to preface the annotated list of species with a certain amount of general discussion. First, it will be convenient to tabulate the additions which are made to Todd and Carriker's previously mentioned list of birds of the Santa Marta region. The species of *Casmerodias*, *Chauna*, and *Cairina* are included on field identifications as described under their respective headings; the other records are based on specimens. *Dumetella carolinensis* (Linné), the Catbird, and *Dendroica c. coronata* (Linné), the Myrtle Warbler, seem to be previously unrecorded from South America, while *Porzana flaviventer bangsi* is described as new. This list closes very few of the local *lacunae* which are discussed by Todd and Carriker, and so does not affect their statement that the Santa Marta fauna is depauperate.



*Additions to the List of Birds of the Santa Marta Region*

(List 1)

Pوليوcephalus dominicus brachyrhynchus (Chapman)  
 Ixobrychus involucris (Vieillot)  
 Casmerodias alba egretta (Gmelin)  
 Chauna chavaria (Linné)  
 Cairina moschata (Linné)  
 Querquedula d. discors (Linné)  
 Porzana flaviventer bangsi Darlington  
 Porzana albicollis (Vieillot)  
 Gallinula chloropus pauxilla Bangs  
 Catoptrophorus semipalmatus inornatus (Brewster)  
 Arenaria interpres morinella (Linné)  
 Claravis m. mondetoura (Bonaparte)  
 Coccyzus pumilus Strickland  
 Podager nacunda minor Cory  
 Chordeiles minor aserriensis Cherrie  
 Lurocalis s. semitorquatus (Gmelin)  
 Chaetura andrei meridionalis Hellmayr  
 Dumetella carolinensis (Linné)  
 Phaeoprogne t. tapera (Linné)  
 Dendroica c. coronata (Linné)  
 Sporophila lineola restricta Todd

Thirty-seven migrant or non-resident species were secured by the writer and are listed below. The six which are starred are additions to the list of sixty-six given by Todd and Carriker (pp. 56, 57), so that the total number of known non-resident species in the Santa Marta region is now seventy-two.

*List of Migrants Recorded in this Paper*

(List 2)

\*Querquedula d. discors  
 Porzana carolina  
 Bartramia longicauda  
 Actitis macularia  
 Tringa s. solitaria  
 Totanus flavipes  
 \*Catoptrophorus semipalmatus inornatus  
 Capella gallinago delicata

Charadrius semipalmatus  
 \*Arenaria interpres morinella  
 Coccyzus a. americanus  
 \*Chordeiles minor aserriensis  
 Tyrannus c. curvirostris  
 Tyrannus tyrannus  
 Myiarchus c. crinitus  
 Empidonax t. traillii  
 \*Dumetella carolinensis  
 Hycloichla minima aliciae ?  
 Vireo f. flavoviridis  
 Hirundo rustica erythrogaster  
 Setophaga ruticilla  
 Seiurus n. noveboracensis  
 Seiurus motacilla  
 Oporornis philadelphia  
 Oporornis agilis ?  
 Oporornis formosus  
 Dendroica striata  
 Dendroica a. aestiva  
 \*Dendroica c. coronata  
 Vermivora peregrina  
 Protonotaria citrea  
 Mniotilta varia  
 Icterus galbula  
 Icterus spurius  
 Piranga r. rubra  
 Hedymeles ludovicianus  
 Spiza americana

Before discussing the distribution of birds near Rio Frio, it will be necessary to list several groups of the commoner and more conspicuous species, that is to say, the species of which the local ranges have been determined with some accuracy. All non-resident species have been omitted, as have all those with aquatic or semi-aquatic habits.

*Commoner Birds Locally Restricted to the Semi-arid Area*

(List 3)

Scardafella squammata ridgwayi  
 Columba gymnophthalmos  
 Sapphironia caeruleigularis duchassaingii

Podager nacunda minor  
 Mimus gilvus columbianus  
 Cassidix mexicanus assimilis

*Commoner Birds Characteristic of, but not Restricted to, the  
 Semi-arid Area*

(List 4)

Columbigallina passerina albivitta  
 Aratinga pertinax aeruginosa  
 Crotophaga major  
 Muscivora tyrannus  
 Machetornis rixosa flavigularis  
 Heleodytes pardus  
 Sicalis f. flaveola

*Commoner Birds Generally Distributed on the Coastal Plain*

(List 5)

The species of the following list vary in their center of abundance, some being more abundant in the semi-arid, others in the humid areas, while still others are evenly distributed. All are fairly common in suitable habitats throughout the plain, however.

Coragyps urubu  
 Ganpsoonyx swainsoni meridensis  
 Falco sparverius isabellinus  
 Polyborus c. cheriway  
 Colinus sonnini decoratus  
 Leptotila v. verreauxi  
 Columbigallina r. rufipennis  
 Columba rufina pallidicrissa  
 Forpus spengeli  
 Brotogeris j. jugularis  
 Hypnelus r. ruficollis  
 Galbula ruficauda pallens  
 Picumnus c. cinnamomeus  
 Chrysoptilus punctigula ujhelyii  
 Centurus r. rubricapillus  
 Dendroplex p. picirostris  
 Sakesphorus canadensis pulchellus  
 Furnarius leucopus longirostris

*Tyrannus melancholicus chloronotus*  
*Troglodytes musculus atopus*  
*Heleodytes minor albicilius*  
*Icterus n. nigrogularis*  
*Molothrus bonariensis cabanisi*

It would be possible to draw up a list of the birds inhabiting both the humid and intermediate areas but not occurring in the semi-arid one, but such a list would be of no value here. It would contain the majority of the commoner species not included in the preceding lists, for all of the humid-country birds except a few strict forest dwellers occur in the so-called intermediate area. The intermediate area is, therefore, less well defined than the others. It consists mostly of the depauperate outskirts of the humid area, and seems to have no characteristic species of its own. Its recognition, however, brings out certain points which would otherwise be obscured.

In discussing the local ranges of birds it will be necessary to distinguish clearly just what is meant here by "area" (semi-arid, intermediate, and humid) and what relation the areas bear to habitat. The three areas have already been mentioned and are outlined on the map on page 351. They are each continuous, and are characterized by different degrees of humidity and by different types of vegetation, but they must not be thought of as homogeneous, for each contains many different sorts of country which may be referred to as habitats. Thus there are, among others, forest, second-growth, semi-open, and field habitats in the humid area, and a similar range of dry forest, second-growth, semi-open, and field habitats in the intermediate area, although as a rule the corresponding habitats of the two areas are distinctly different. One can also speak of a woodland habitat in general, meaning the various sorts of forest and second-growth of the humid and intermediate areas combined. "Woodland" is merely one example of a class of words which are easily understood and which are particularly useful in indicating the general habitat of a bird when the exact boundaries of its range are not known. Such general terms are made necessary by the complex intergradation of many of the local habitats. The matter is still further complicated by the fact that, although there are many birds which may be assigned to such general habitats as "woodland" or "semi-open" (the latter is a particularly useful word), there seem to be comparatively few common ones with mutually coinciding local ranges.

The first outstanding characteristic of the local avifauna is the great

preponderance of both species and individuals in the humid area. The small number of species in the semi-arid area is shown in the lists, while the comparative paucity of individuals is soon noticed in the field. This is closely correlated with the distribution of vegetation, for the semi-arid plain supports only a low scrub which is not comparable to humid forest or even to the heavier growths of deciduous "dry forest." Furthermore, the small size of the local semi-arid area, its isolation from other tracts of similar country, and the small variety of habitat which it offers are all factors which tend to reduce the number of species found there. The distribution of the birds is probably not directly dependent on humidity, but rather on the plants which yield food. Precipitation and humidity are largely instrumental in determining the nature of the flora, however, so the final effect is the same. As an entomologist, I noticed particularly that insects were scarce in the semi-arid region. This fact also is correlated with the distribution of plants and contributes directly to the scarcity of the birds.

Another striking fact is that most of the birds are distributed by habitat rather than by "area." Thus the more open habitats of the humid area have, as far as the birds go, more in common with the open parts of the distant semi-arid area than they have with the adjacent humid forest. This is, of course, another example of the dependence of birds on the flora rather than on humidity. It may be added that birds often ignore what seem to us to be distinct natural boundaries. This is illustrated by the fact that only two of the commoner species (*Basileuterus delatarii mesochrysus* and *Arremon schlegeli*) were found to have their local ranges exactly limited by the edge of the Rio Frio hills. Both of these birds inhabited the foothill valleys of the Sierra Nevada and descended down to, but not upon, the plains.

List number 5 (of birds occurring in all three areas) illustrates another local phenomenon, that successful or dominant species, those which are represented by many individuals in any given locality, are, on the whole, more generally distributed than the others. Of the thirty-three species on the list, all but seven (*Gampsonyx swainsoni meridensis*, *Falco sparverius isabellinus*, *Forpus spengeli*, *Picumnus c. cinnamomeus*, *Chrysoptilus punctigula ujhelyii*, *Sakesphorus canadensis pulchellus*, and *Molothrus bonariensis cabanisi*) are conspicuously successful as judged by the number of individuals encountered in the field. No such average abundance was noted among the birds which are confined to one or two of the local areas. It will be noticed that almost all of the birds which are conspicuously dominant and generally distributed

on the coastal plain are species inhabiting semi-open land. Since the semi-open is mostly of recent origin (produced by man in the last century or two), many of its birds must be new arrivals which owe their presence to their vigor and ability to invade new country. It is possible, therefore, that there would be a much weaker correlation between dominance and general distribution if the vegetation of the coastal plain had not been modified so recently. Among the beetles, too, as among the birds, the species which inhabit the semi-open are usually more dominant, *i. e.* are represented by much larger or denser populations, than are those which inhabit the forest.

It may be noted in passing that it is true of this region, as of others, that the birds which are popularly thought of as "tropical" are, usually, forest dwellers. They include most of the curassows, macaws, large parrots, toucans, trogons, woodhewers, and manakins.

The true water birds and such land birds as are closely associated with swamps (especially the hawks *Rostrhamus sociabilis* and *Busarellus nigricollis*, the ovenbird *Certhiaxis cinnamomeus fuscifrons*, the flycatchers *Arundinicola leucocephala* and *Fluricola pica*, the mockingbird *Donacobius atricapillus brachypterus*, and the yellow-headed blackbird *Agelaius i. icterocephalus*) are distributed without reference to the "areas." The largest fresh swamps are at Cienaga, for instance, and are entirely surrounded by semi-arid country, but they swarm with herons, gallinules, jacanas, and a host of less conspicuous birds. The most attractive parts of the Cienaga swamp are the cat-tail (*Typha*) beds. Unlike most *Typha* swamps, they usually have hard bottoms, so that one can wade easily and very quietly through parts of them by following certain narrow, natural paths through from two to five feet of water. The ornithologist has thus the unique experience of being able to stalk and observe rails in their normal haunts. Fortunately the swamps are so near the city of Cienaga that there is no danger of really large crocodiles, although small ones abound. The mangrove swamps of the Cienaga Grande are also worth mentioning, but I had so little opportunity to visit them that I can add nothing to the account given by Todd and Carriker (p. 67).

Perhaps the most interesting local birds are those (list 4) which regularly inhabit the semi-arid area but which are sometimes found in the more humid regions, for they include several species which seem to have a distinct seasonal migration. This consists of a movement of *part* of the population from the semi-arid to the intermediate or humid areas during the dry season (December to May). The cause is probably seasonal variation in the food supply in the drier areas, which have



more contrasted seasons than the wet ones, just as the migration of our northern birds is due to seasonal variation in the food supply in the North. The species definitely involved are *Columbigallina passerina albivitta*, *Aratinga pertinax aeruginosa*, *Crotophaga major*, and *Sicalis flaveola flaveola*. These are all common and conspicuous birds, and their presence at Rio Frio during the dry season and not at other times was well established as described for each species under its specific heading in the annotated list. The same migratory habits may have been overlooked in other less conspicuous birds.

It is not to be understood that the birds which are local migrants at Rio Frio are not resident in other parts of the more humid plain, for the *Columbigallina*, *Crotophaga*, and *Sicalis* were all found by Carriker at Tucurinca or Fundacion during the rains. One must remember, also, that none of the species entirely deserts the semi-arid area at any time. The *Aratinga* is the simplest case, for it seems merely to extend its range a little when dry weather sets in and to contract it a little on the return of the rains. It does not require much imagination to suppose that the three other species once had the same habit, but that part of their population has been permanently stranded in the humid area. It is possible, of course, that the opposite process has occurred and that one or more of the species has invaded the dry from the humid area by migration at favorable seasons. In any case, the result seems to be that each species has two breeding ranges located in different types of country, and separated by a space which is utilized as a feeding ground only at certain times, when the birds are pressed for food.

The isolation of part of a species in a habitat different from that of the parent stock is a condition which is supposed to favor the formation of a local race. It has apparently not been effective in the species discussed above, but it may have been in the case of *Forpus spengeli*. This little parrot is common both in the semi-arid scrub at Cienaga and in the open woodland at Aracataca, but is much less frequently encountered in the intermediate area near Rio Frio. It has thus two local centers of abundance, although they seem to be connected by a scattering of resident birds (this may not be the case, for parrots range more widely than most other birds, so that wandering flocks from the dry area may have reached Rio Frio at all seasons). *Forpus spengeli* seems already to have started differentiating, for Todd and Carriker (p. 203) point out differences between Cienaga and Fundacion birds.

That local migration, caused by variation in the food supply of one of two adjacent tropical environments, has resulted in the isolation and modification of part of a species is an hypothesis which requires



more study for its confirmation. In any case, the division of a comparatively homogeneous habitat into two or more parts by geological changes seems to have been a more effective agent locally. This is clearly shown by Todd and Carriker's discussion of the relationships of the birds of the Santa Marta Mountains. The local subtropical and temperate zones, for instance, have no birds represented by a race in each (except possibly one species of *Henicorhina*), while several species of each have allied races in the corresponding zones of the Andes. It seems that, in these cases at least, isolation has been more important in the formation of local races than have differences in climate.

Several other subjects, such as the songs of neotropical birds and the distribution of bird life in a tropical forest, are so excellently treated in Chapman's recent book<sup>1</sup> on Barro Colorado Island that there would be no excuse for discussing them here. There remain to be considered, therefore, only a few minor details concerning the annotated list.

As far as possible, the present paper follows the order and terminology of *The Birds of the Santa Marta Region*. When it has been necessary to use a different name or combination of names for a species, the one used by Todd and Carriker is cited in synonymy; otherwise all synonyms are omitted. Only such native names as seem to be in common use have been mentioned, for many obliging Colombians will coin names while the ornithologist waits. I have tried to spell the names just as I heard them. This means that some will differ from the spelling of previous writers, and that very few will be found in a dictionary of pure Castilian Spanish.

The relative abundance of each species has been indicated by such terms as "common," "scarce," and "rare." When a bird was recorded only once or twice, however, the actual records have been given, but, since all dates lie between June, 1928 and April, 1929, the year has usually been omitted. Each bird's habitat is indicated as far as possible, and notes on taxonomic relationship, nesting, songs, and behavior have often been added. All the species which were recognized in Colombia have been included, but consecutive numbers have been given only to those which were found within three miles of Rio Frio, so that the strictly local Rio Frio fauna may be distinguished at a glance. Unless a definite statement is made to the contrary, every numbered species has been identified from a specimen collected near the town, although exact records of many of the commoner ones have been omitted. Descriptions have been almost entirely omitted, except that brief notes

<sup>1</sup> *My Tropical Air Castle*, by Frank M. Chapman, Appleton, 1929.

have been added to aid in the recognition of a few of the commoner local species which are not included in Sturgis' Field Book of the Birds of the Panama Canal Zone.<sup>1</sup>

*Annotated List of Species*

Family COLYMBIDAE. Grebes

POLIOCEPHALUS DOMINICUS BRACHYRHYNCHUS (Chapman)

Two of these little grebes were encountered on March 9 in a weedy bay of one of the larger open ponds in the Cienaga fresh swamps. Neither bird showed more than its head above the water at any time. One of them, an adult ♀, was collected and apparently constitutes the first record for the species from the Santa Marta region, although its occurrence there is not surprising. On April 13, about fifteen birds were seen in the same pond. They spent comparatively little time submerged but took short flights of forty or fifty feet when approached too closely.

Family PHALACROCORACIDAE. Cormorants

1. PHALACROCORAX OLIVACEUS OLIVACEUS (Humboldt)<sup>2</sup>

*Phalacrocorax vigua vigua* Todd and Carriker.

Cormorants are common along the Cienaga Grande at Sevillano and in the Cienaga fresh swamps. Near Rio Frio they occur along the river, which they follow for at least a kilometer into the foothills of the Sierra Nevada. No specimens were taken.

Family PELECANIDAE. Pelicans

PELECANUS OCCIDENTALIS Linné

The Brown Pelican is never seen inland even along the rivers, but is a common and conspicuous bird on the coast and in the Cienaga Grande near Sevillano.

Family ARDEIDAE. Herons

IXOBRYCHUS INVOLUCRIS (Vieillot)

The dense mass of cat-tails (*Typha*) which occupies many acres of the Cienaga fresh swamp forms ideal cover for such a retiring bird as this

<sup>1</sup> Field Book of Birds of the Panama Canal Zone, by Bertha B. Sturgis, Putnam's, 1928.

<sup>2</sup> Cf. Richmond, Proc. Biol. Soc. Washington, 39, 1926, p. 142.

little, streaked bittern, which was, indeed, seen nowhere else. It is probably fairly common, for three birds were shot and several others flushed, but it is very difficult to detect in its chosen haunts. The two specimens preserved both appear to be adult males; one was collected November 24 and the other April 13.

*I. involucris* seems not to have been recorded before from anywhere so far north, its known range having included parts of Argentina, Patagonia, Uruguay, South Brazil, and Chile. Of the two Cienaga specimens, Mr. Bangs says, "I have compared these with five birds from Chile and Argentina borrowed from the United States National Museum. The northern birds are quite the same in both size and color."

#### CASMERODIAS ALBA EGRETTA (Gmelin)

A large and shy white heron was seen occasionally in the fresh swamps at Cienaga and was common across an arm of the Cienaga Grande from Sevillano in January. Scores of individuals were standing along the edge of open water, looking, from the distance of a quarter mile or more, like Japanese figures against the dark green of the mangroves. The birds were almost certainly American Egrets. Although the species has not been recorded before from the Santa Marta region, it is mentioned from the Cauca Valley and the Magdalena River by Chapman.

#### 2. FLORIDA CAERULEA (Linné)

An abundant bird in the fresh marshes of Cienaga. Although no specimens were taken, I am reasonably sure that a small white heron seen on a few occasions near Rio Frio was of this species.

#### 3. PILHERODIUS PILEATUS (Boddaert)

This is a pearl-gray and white heron with a black crown and sometimes with a few long, ribbon-like, white occipital plumes. An adult ♀ was collected at Rio Frio on March 7, and other birds were seen from time to time near small swamps or irrigating ditches, often in the open forest. By day they were usually found in the tops of trees.

#### 4. BUTORIDES STRIATUS STRIATUS (Linné)

*Butorides striatus* Todd and Carriker.

An adult ♂ of *B. striatus* was secured in a fresh marsh near Rio Frio, September 28. My field notes do not distinguish between the two

species of *Butorides* which have been previously recorded from the region. One or both are abundant in the fresh swamps at Cienaga and Rio Frio, and wherever else there are suitable retreats. On several occasions during March and April numbers were observed at dusk on gravel bars of the Rio Frio River just above the railroad, but I did not discover whether they spent the day in the neighboring trees or flew over from the swamps, of which the nearest was about a mile away.

NYCTICORAX NYCTICORAX NAEVIUS (Boddaert)

Several Black-crowned Night Herons were noted in trees in the fresh swamps at Cienaga on March 9.

Family CICONIIDAE. Storks

MYCTERIA AMERICANA (Linné)

Three Wood Ibises were seen together beside a shallow, muddy pool in a pasture near Cienaga, not far from the swamps, on March 22. They flushed at a long distance from my gasoline track car (evidence that they were not familiar with the region) and were not seen again.

Family ANHIMIDAE. Screamers

CHAUNA CHAVARIA (Linné)

"Chevarias" are said by hunters to be common in the swampy forest along the lower parts of the Aracataca and Tucurinca Rivers. I flushed one from a swamp near Aracataca on March 3 and several times saw a tame individual in the United Fruit Company's *Prado* at Sevilla. This bird would attack and rout dogs with its wing spurs. The local name is derived from the raucous call, which is frequently uttered at night. No specimens were taken, but the bird is, of course, easily recognized by its large size, erect posture, pale head and crest, and large wing spurs. Its addition to the Santa Marta list was to be expected, for Chapman has noted the species as common along the Magdalena River.

Family ANATIDAE. Ducks, etc.

CAIRINA MOSCHATA (Linné)

Local hunters are familiar with a duck which they call the "Pato Real," which is said to occur during the dry season in huge flocks in

isolated swamps along the Cienaga Grande west of Aracataca. It is also occasionally reported elsewhere. The bird is always described as black with a red head and with white on the wings, and was stated by a reliable sportsman to reach a weight of nine pounds. Unfortunately I never saw this duck, but its identification as the Muscovy can hardly be doubted, especially since Chapman has recorded the species from the lower Magdalena River. The bird is new to the Santa Marta list.

#### DENDROCYGNA DISCOLOR Sclater and Salvin

A flock of about a dozen Tree Ducks was seen repeatedly in the fresh marshes of Cienaga during November. They usually fed in pairs or small groups in small, weedy swamp holes, but gathered in tall trees when flushed. An adult ♂ was collected November 17. The species was entirely absent from this locality during the following February and March.

#### QUERQUEDULA DISCORS DISCORS (Linné)

A solitary ♀ Blue-winged Teal was collected in the Cienaga fresh marshes on November 10 and a ♂ was secured from a flock of five encountered in the same place on March 9. This is probably the duck which was present in thousands on the shallow, open water of the Cienaga Grande near Sevillano during the dry season (noted January 20 and February 20). The birds at this place had learned to avoid the shores, however, and would not fly past an unconcealed hunter, so that none could be obtained. The two Cienaga specimens seem to be the first recorded from the Santa Marta region. The ♂ shows traces of white on the nape and superciliaries but does not attain the characters of *Q. d. albinucha* Kennard, the status of which is still considered doubtful.

#### Family CATHARTIDAE. American Vultures

5. SARCORAMPHUS PAPA (Linné)

6. CATHARTES AURA AURA (Linné)

7. CORAGYPS URUBU (Vieillot)

In the neighborhood of Rio Frio, the Black Vulture is abundant, the Turkey Vulture fairly common, and the King Vulture rather rare. The last species was seen at Sevilla in November and near Rio Frio December 7, December 21 (two individuals), March 10 and March 17. No vultures were collected and no special remarks on any of them are

necessary except to note that I have seen a large tree in second-growth country east of Sevilla where a Black Vulture was said to have nested, the nest having been on the ground between the root buttresses. I mention this unsubstantiated record only because Carriker has commented on the small number of nests which have been found locally.

Family ACCIPITRIDAE. Hawks, in part

8. CHONDROHIERAX UNCINATUS UNCINATUS (Temminck)

Only two individuals were seen, both in open forest near Rio Frio. Both were secured, a ♀ on August 19 and an unsexed bird on March 15.

9. GAMPSONYX SWAINSONI MERIDENSIS Swann

*Gampsonyx swainsoni* Todd and Carriker.

Carriker correctly likens the haunts and habits of this pale little kite to those of the Sparrow Hawk (*Falco sparverius isabellinus*). The two species are about equally common near Rio Frio.

10. HARPAGUS BIDENTATUS BIDENTATUS (Latham)

*Harpagus bidentatus* Todd and Carriker.

The *Harpagus* resembles a small *Buteo* in the field. It occurs in woodland, and was recorded only twice near Rio Frio, once when an adult ♂ was brought in by my friend Cornelius Opryshek, on December 3, and once when I shot (but failed to preserve) a bird on March 10.

11. ICTINIA PLUMBEA (Gmelin)

The only individual seen, an adult ♂, was shot from a tall tree in partly cleared land near Rio Frio, March 11. Its stomach contained the broken remains of a large beetle of the genus *Chalcolepidius*.

12. ROSTRHAMUS SOCIABILIS SOCIABILIS (Vieillot)

An adult ♀, the second specimen to be recorded from the Santa Marta region, was collected in a small swamp near Rio Frio on February 24. Unless I am mistaken in my field identifications, which is not likely in view of the bird's distinctive, slender beak, this is a rather common species in certain restricted localities such as along the railroad just north of Aracataca and in the fresh swamps at Cienaga. It is, of course, a sluggish bird, usually to be seen perching low down in open



places. Near Rio Frio it is very rare. Fresh snail shells (*Ampularia*) which had doubtless been dropped by this kite were found under a fence post in a swampy field on Patuca Farm, between Tucurinca and Sevilla, in the spring of 1929.

### 13. ACCIPITER BICOLOR BICOLOR (Vieillot)

One ♂ and one adult ♀ of this woodland species were secured. The ♀, shot March 10 in the heaviest patch of forest remaining near Rio Frio, had an egg practically ready to lay in the oviduct. In exactly the same locality during the rains of 1928 (October or November) a "blue and buff hawk," perhaps the same bird, had been attracted as I was squeaking up an ant-bird, but had escaped.

### 14. HETEROSPIZIAS MERIDIONALIS MERIDIONALIS (Latham)

This big, reddish hawk is fairly common in stump land, rough pastures, and other open places where there are convenient perches. It looks and acts like a large *Buteo*. In my experience it is not especially partial to water, although it does sometimes occur near swamps.

### 15. URUBITINGA ANTHRACINA ANTHRACINA (Nitzsch)

A striking species which is apparently confined, in the vicinity of Rio Frio, to the wooded river valleys of the lower foothills. Similar birds were noted in the fresh swamps at Cienaga, but they may have been *U. urubitinga* (Gmelin), which is hardly to be distinguished in life. An individual probably of *anthracina* was seen flying down the valley of the Quebrada Mateo near Rio Frio on March 31, carrying a large toad in its claws. The hawk's call is a weak, repeated cry. No skins were made of this species, but it has been identified from the description and measurements of a bird shot near Rio Frio on March 25.

### 16. ASTURINA NITIDA COSTARICENSIS Swann

*Asturina nitida nitida* Todd and Carriker.

In the Museum of Comparative Zoölogy, there are three adults of *Falco nitidus* Latham from the collection of Mr. T. E. Penard. They are from near Paramaribo, Surinam. These are probably true *nitidus*, which was described from Cayenne, and are distinctly darker than Santa Marta birds both above and below. Santa Marta specimens agree fairly well with the type and two other skins of *A. n. costaricensis* Swann, but average slightly paler and larger. The differences, however,



seem to be too slight and inconstant to be recognized in nomenclature. The following adult specimens have been examined in reaching these conclusions:

*A. nitida nitida*

No.	Sex	Locality	Wing
M. C. Z. 143,057	[ ♀ ]	Vic. of Paramaribo, Surinam	257 mm.
M. C. Z. 143,061	♀	" " " "	253
M. C. Z. 143,063	♂	[ " " " " ]	231

*A. nitida costaricensis*

M. C. Z. 117,983 (type)	♂	Pozo del Rio Grande, Costa Rica	237 mm.
M. C. Z. 107,080	♂	Loma del Leon, Panama	232
M. C. Z. 14,729	[ ♀ ? ]	Isthmus of Panama, Atlantic side	245
M. C. Z. 141,821	[ ♂ ? ]	Rio Frio, Santa Marta, Colombia	241
Carnegie M. 42,676	♂	Fundacion, Santa Marta, Colombia	238
Carnegie M. 44,376	♂	Don Diego, " " "	242
Carnegie M. 42,961	[ ♂ ]	Fundacion, " " "	235
Carnegie M. 42,914	♀	Fundacion, " " "	245
Carnegie M. 42,595	♀	Mamatoco, " " "	258

The so-called Shining Buzzard Hawk is a fairly common species which looks and acts like a *Buteo*, keeping generally to partly open localities where there are perches. A pale gray (adult) individual shot in forest near Rio Frio in January dropped the remains of a young iguana. A specimen shot January 1, but later destroyed by ants, was molting from the brown to the gray plumage and reducing the number of bars in its tail.

### 17. RUPORNIS MAGNIROSTRIS INSIDIATRIX Bangs and Penard

*Rupornis magnirostris insidiatrix* is one of the characteristic species of stump land, forest borders, and other semi-open places in the Santa Marta region. It is a rather small, *Buteo*-like bird and is very sluggish and conspicuous. Its frequently uttered call is a succession of loud yells.

### 18. BUSARELLUS NIGRICOLLIS (Latham)

A scarce bird except in the fresh swamps near Cienaga, where it is often encountered. One was seen in the mangroves along the Cienaga Grande at Sevillano on January 20. One was noted at Sevilla in October and one near Rio Frio in November. The identification has been made from the description of a bird shot January 3 at Rio Frio, but not skinned. This species is almost invariably seen over water. It has a harsh, rattling note.

19. *OROAËTUS ISIDORI* (Des Murs)

Two individuals of this crested eagle were seen near Rio Frio, both in the deep, wooded valley of the Quebrada Mateo between 500 and 1,500 feet. The first, an adult ♂, was secured February 17 and roughly skinned with a machete for transportation. The second, a predominantly white (immature) bird, was shot March 17 but unfortunately could not be preserved. Both birds were found perching low down in nearly leafless, deciduous forest.

## Family FALCONIDAE. Hawks, in part

20. *HERPETOTHERES CACHINNANS CACHINNANS* (Linné)

The Laughing Hawk is scarce but not rare near Rio Frio, where it is usually to be found in scattered trees in pasture land.

21. *MICRASTUR MELANOLEUCUS MELANOLEUCUS* (Vieillot)

*Micrastur brachypterus brachypterus* Todd and Carriker.

Forest undergrowth is the cover most frequented by this *Accipiter*-like hawk, which is fairly common in pairs near Rio Frio. On one occasion, I shot a bird which dropped the body of a little owl (*Glaucidium*).

22. *FALCO ALBIGULARIS* Daudin

*Falco albigularis albigularis* Todd and Carriker.

Bat Falcons were seen three or four times in stump land near Rio Frio, where an adult ♂ was collected on August 24. The birds seemed to be as active by day as the other members of the genus.

23. *FALCO FUSCOAERULESCENS FUSCOAERULESCENS* Vieillot

Two specimens of this species were secured in open country near Rio Frio, an adult ♀ on July 31 and an adult ♂ on October 16. The species is an infinitely more agile and powerful flier than are the smaller local falcons.

24. *FALCO SPARVERIUS ISABELLINUS* Swainson

Sparrow Hawks are common but somewhat local from Cienaga to Aracataca, and one was once seen in the United Fruit Company's *Prado* in Santa Marta. I have seen the bird both carrying and eating lizards. In general *isabellinus* behaves like our New England race.

## 25. POLYBORUS CHERIWAY CHERIWAY (Jacquin)

Caracaras are characteristic of the open country, where they may sometimes be seen feeding with vultures on carrion. They have several harsh, rattling notes. The Colombians call them "Dio Pio" or "Garapatero," but I did not see the birds looking for ticks on cattle. During October several families of adult and obviously young birds were seen in the banana fields.

## 26. MILVAGO CHIMACHIMA CORDATA Bangs and Penard

The *Milvago* occurs in the same sort of places as the preceding species, with which it shares the name "Dio Pio." The two birds look very much alike in flight, but the present one, of course, is smaller and lacks the black crest of the other.

## Family TINAMIDAE. Tinamous

## 27. CRYPTURELLUS SOUI MUSTELINUS (Bangs)

*Crypturornis soui mustelinus* Todd and Carriker.

An adult ♂ was collected in rather heavy forest near Rio Frio on December 3. Other birds probably of this species, but perhaps in some cases the following, were shot for the table in the same general locality on January 10, February 14 (two), February 23, and March 10.

The little tinamous live on the ground in forest underbrush and dense second-growth, where they are almost impossible to secure during the rainy season. When the dead leaves on the forest floor have dried, however, the birds can be heard walking about and can be killed rather easily. They are very graceful, and move more like rails than fowls. The Colombians call them "Gallinetas del Monte," or "Little Bush Chickens."

## 28. CRYPTURELLUS CINNAMOMEUS IDONEUS (Todd)

*Crypturornis idoneus* Todd and Carriker.

An adult ♂ was collected September 22, 1928, about two miles southeast of Rio Frio, thus extending the known range of the race well to the south of the town of Santa Marta. The bird was brooding a set of three eggs. The nest was a slight depression on the ground under a mass of brush and vines in a small opening in heavy forest and was discovered by the merest accident. When I first approached, the tinamou shot up like a rocket for about twenty-five feet, leveled off,

and disappeared instantly. It was secured eventually only by shooting at a mark placed before the nest. One of the eggs was broken, the others are "pale vinaceous-faun" by Ridgway's Color Standard, are very uniformly colored and rather glossy, and measure  $47 \times 38$  and  $46 \times 38$  mm. The embryos were only a little developed. The testes of the brooding ♂ were about 20 mm. long.

Family PERDICIDAE. Quail

29. COLINUS SONNINII DECORATUS (Todd)

*Eupsychortyx leucopogon decoratus* Todd and Carriker.

Dry, thorny scrub, grassland, and the borders of banana lots all offer satisfactory cover to the local quail, which is consequently an abundant bird. The Colombians call it "Cordoní." It goes in pairs and coveys and acts and calls like out northern Bobwhite. Where it is common it provides excellent hunting. Near Rio Frio the birds roost in coveys a few feet above the ground in dense masses of brush or the borders of woodland. A ♀ shot September 15 at Donjaca had an egg nearly ready to lay, and nearly grown young were killed several times in November, but this is not the only breeding season, for a downy, peeping young bird was found near Sevillano February 20, in company with four actively flying and presumably adult individuals. On the same day a partial albino adult ♂, with white feathers among the secondaries, tertials, and greater wing coverts, was shot from a covey of about seven normal individuals. In addition to the albino, only one bird, a normal adult ♂ from Aracataca, July 1, was preserved.

Family CRACIDAE. Curassows

30. ORTALIS GARRULA (Humboldt)

A common species in the worst sort of second-growth and bushy forest, where it is usually flushed from the dense tops of low trees. In the early morning and evening the birds find commanding perches in leafy tree tops and indulge in series of rattling cackles, from which the Colombians get the local name of "Guacharaca." I have seen as many as four birds in one tree at this time, and think that two or more often call together. Their cackling can be heard easily half a mile away. Although the species advertises so effectively, it is wary and extraordinarily hard to shoot, for it usually glides off with a tree between itself and the hunter. Only a single specimen was collected, an adult ♂ at Rio Frio, March 11.

## 31. PENELOPE AEQUATORIALIS Salvadori and Festa

In the neighborhood of Rio Frio this guan seems to be restricted to the foothills of the Sierra Nevada, where it is fairly common at low altitudes. Its habit of squawking and flying only a short distance when flushed has probably caused its destruction on the coastal plain. The only specimen collected was shot February 17 at about 1,500 feet in the Rio Frio foothills, in a wooded valley where it had been feeding on small berries. A tame bird was seen walking with chickens in a yard in Aracataca, March 3. The local name is "Pava."

## 32. CRAX ALBERTI Fraser

A single pair of the big *Crax* curassow was seen soon after I reached Colombia, probably in March or April, in the foothills along the Rio Frio River. The birds were on the ground in open forest. Feathers of a fresh kill were found in the Quebrada Mateo about two miles east of Rio Frio on December 7, and feathers were seen on several other occasions, attesting the fact that the bird is much hunted locally. On March 3, a male and two females were seen in a pen at Aracataca and were said to have been caught near by. The Colombian name is "Pajuil" (pronounced pã-whéel), which may be a contraction of Pava Real, or Royal Pheasant.

## Family ARAMIDAE. Courlans

## 33. ARAMUS SCOLOPACEUS SCOLOPACEUS (Gmelin)

These birds are common about marshy land, in wet and dry meadows, and even in banana lots. They run well on open ground and often alight on trees or banana *cepas* when flushed. Birds were noted at Cienaga, Orihueca, Tucurinca, Sevilla, Aracataca, and Rio Frio, where an adult ♂ was collected October 16.

## Family RALLIDAE. Rails

## 34. ARAMIDES CAJANEUS CAJANEUS (Müller)

*Aramides cajaneus chiricote* Todd and Carriker.

The common Wood Rail is to be found from Aracataca to Santa Marta wherever there is dense cover near swamps or wet ditches. It certainly is not confined to heavy forest. It is, however, a shy bird which greatly prefers running to flying, so that it is easily overlooked.

An adult ♂ was collected at dusk, October 2, as it was walking up a nearly horizontal limb several yards above the ground in a small patch of woods near Rio Frio. Almost all my other records were made during the dry season, when the birds are apparently forced more into the open to find food.

PORZANA CAROLINA (Linné)

The Sora Rail is a common winter resident in the fresh cat-tail (*Typha*) swamps near Cienaga. It was not seen in any other locality. Two birds were collected, one on November 17 and the other, an adult ♂, on February 27, while the species was noted also on November 24 and April 13.

35. PORZANA ALBICOLLIS (Vieillot)

*Porzana albicollis* is a plainly colored rail about the size of *P. carolina*. It was seen only in an area of low reeds and grass on the edge of a cat-tail swamp northeast of Rio Frio. An adult ♀ was collected on August 21 and several other individuals were flushed and shot for the table about the same time, but special search in the same place later, during the dry season, failed to reveal a single bird. The specimen secured seems to be the first to be recorded from the Santa Marta region.

PORZANA FLAVIVENTER BANGSI, subsp. nov.

*Type*.—Museum of Comparative Zoölogy, no. 141,831; adult ♂, from Cienaga, Magdalena, Colombia, April 13, 1929, P. J. Darlington, Jr.

*Characters*.—Differs from *P. f. flaviventer* (Boddaert) in having the breast and sides of the neck with a much paler buffy wash. Differs from *P. f. gossii* (Bonaparte) in having the upper wing coverts, rump, and interscapular region markedly blacker, less brownish, and more spotted or streaked with white.

*Measurements (in millimeters)*

No.	Sex	Wing	Bill	Tarsus
M. C. Z. 141,831 (type)	Ad. ♂	64	16	22
M. C. Z. 141,832	Ad. ♂	63	—	23
M. C. Z. 141,833	Ad. ♀	65	16	22

*Material examined*

*Porzana flaviventer flaviventer* (Boddaert). One ♀ (no. 560 Penard Coll.) from near Paramaribo, Surinam, April 28, 1914. One, sex not determined (M. C. Z. 74,374), from the same locality. One, sex not de-



terminated (M. C. Z. 88,779), from the Lafresnaye Collection, said to be from Brazil.

*Porzana flaviventer bangsi* Darlington. Two, ♂ ♀, from Cienaga, Magdalena, Colombia, April 13, 1929. One ♂ from the same locality, February 27, 1929.

*Porzana flaviventer gossii* (Bonaparte). Ten, ♂♂ ♀♀, from Jamaica; six, ♂♂ ♀♀, from Cuba; all in the collection of the Museum of Comparative Zoölogy.

All the specimens listed above except the two undated skins of *P. f. flaviventer* are labeled as having been collected in January, February, March or April, so the Santa Marta series is seasonally comparable.

Cayenne is the type locality of *Rallus flaviventer* Boddaert, which was based on Daubenton's Plate 847, Pl. Enlum. The three birds from Surinam and Brazil listed above agree fairly well with Daubenton's plate. The Cienaga birds are similarly colored above to typical *flaviventer* but are much paler below, as pale, in fact, as *P. f. gossii* (Bonaparte) from Jamaica and Cuba. *Gossii*, however, is much browner, less black, above, and is much less marked with white. This character is shown best on the upper wing coverts but is evident enough on the rump and interscapulars, although a single ♂ of *gossii* from Jamaica (M. C. Z. 122,878) is darker above than the rest of the series and approaches the characters of the Colombian race. There is no significant geographical variation in size in the material examined.

It gives me great pleasure to name this bird in honor of Mr. Outram Bangs, whose work on the birds of Santa Marta is well known, and to whom I am indebted for the identification of most of my collection from that region.

This tiny rail was frequently flushed from grass and floating vegetation in the Cienaga fresh swamps during the fall of 1928, but the first specimen was not collected until the following February. The birds are extremely reluctant to fly. On one occasion I had to tramp through a patch of brush, some four feet square, three times in order to flush one. It seemed almost incredible that it could hide so long under such circumstances. During the dry season, when the area of floating grass and weeds is much reduced, the species probably retreats to the cat-tails. At any rate, the pair which was obtained April 13 was feeding in grass on solid ground at the edge of a bit of open water, but flew into cat-tail cover as I approached.

#### CRECISCUS ALBIGULARIS (Lawrence)

Although there are several records for the White-throated Crake from different parts of the Santa Marta region, I met with it only in



the fresh swamps at Cienaga. It was commoner there than the Sora Rail, and occurred in tangled brush and weeds as well as in the cat-tails, so that two specimens were collected without difficulty, an adult ♂ on November 10 and a ♀ on February 27. The bird flushes rather easily for a rail but can be approached closely and observed by proper stalking in the cat-tail beds.

### 36. GALLINULA CHLOROPUS PAUXILLA Bangs

The only adult gallinule which was collected (at Cienaga, October 6) proves to belong to this species, one not before recorded from the Santa Marta region. Unfortunately my field notes do not distinguish between this and the following species. One of them is abundant in the fresh marshes at Cienaga, where it feeds along the edge of the swamps and takes noisy refuge in the cat-tails when alarmed. Mr. Bangs says that this habit of retreating to cover is characteristic of the Florida Gallinule, and that the Purple more commonly climbs into a tree when it sights danger, as did the immature "Purple" which I shot. This does not definitely settle the matter, however. Gallinules of one species or the other occasionally showed themselves near Rio Frio. They were scarce there during the rains but fairly common in suitable localities during the dry season, when they were probably forced into the open in their search for food. Of the specimen of *pauxilla* collected at Cienaga, an adult ♂, Mr. Bangs writes, "This is an exact match for the one in the original series from western Colombia."

### IONORNIS MARTINICUS (Linné)

An immature ♂ Purple Gallinule was collected March 9 in the fresh swamps at Cienaga. For further notes which may apply in part to this species see under *Gallinula chloropus pauxilla* Bangs.

### Family RECURVIROSTRIDAE. Stilts, etc.

### HIMANTOPUS MEXICANUS (Müller)

Black-necked Stilts were seen near Cienaga in November and were common along the edge of the Cienaga Grande near Sevillano during the fall of 1928. They were noted at Sevillano on January 20 too, but none was seen there during a brief visit February 20. In the fresh swamps at Cienaga one was seen March 23, two March 26, and about eight April 13. The species seemed to be much less common during the

dry season (our winter) than during migrations. No specimens were taken nor are any notes available on the bird's occurrence during the summer months.

Family SCOLOPACIDAE. Sandpipers, etc.

BARTRAMIA LONGICAUDA (Bechstein)

Two Upland Plover, one of which (sex not determined) was collected, were seen in the semi-arid area at Sevillano on October 20. The birds were flushed from the dry ground amid clumps of giant cacti and thorny, acacia-like trees. This seems to be the second local record for the species.

37. ACTITIS MACULARIA (Linné)

The Spotted Sandpiper is a fairly common winter resident, of which two specimens were collected, a ♂ (not yet in winter plumage) along the beach at Donjaca, September 15, and a ♀ (in first winter plumage) on sand and gravel bars of the Rio Frio River near the town September 9.

38. TRINGA SOLITARIA SOLITARIA Wilson

The first migrant waders which I saw in the Santa Marta region (near Cienaga, August 11, from the train window) appeared to be Solitary Sandpipers, which were abundant during the winter at Cienaga, Sevillano, and Rio Frio. The only specimen actually collected, however, was at Cienaga, November 10.

TOTANUS FLAVIPES (Gmelin)

*Neoglottis flavipes* Todd and Carriker.

One Lesser Yellow-legs was collected in the fresh swamps at Cienaga, March 9. This is a ♀, and seems to be the first spring bird to be secured near Santa Marta, although the species has been recorded several times in the fall.

CATOPTROPHORUS SEMIPALMATUS INORNATUS (Brewster)

Several groups of two or three Willets each were seen on small beaches along the coast of the Caribbean, near Donjaca, on September 15. A ♂ was collected. There seem to be no previous records for the species from the Santa Marta region.

CAPELLA JAMESONI (Bonaparte)

During the writer's ascent in July, 1928, to the northwestern páramo of the Sierra Nevada de Santa Marta two of these snipe were flushed from a slope of sparse grass near 12,000 feet. This was during the rains. On the second ascent, during the dry season in February, 1929, two of the birds were again seen, this time in a swampy place beside a small lake at an estimated altitude of 13,000 feet. Three *Capella delicata* were present at the same place, and showed by comparison the great size of *jamesoni*.

39. CAPELLA GALLINAGO DELICATA (Ord)

*Capella delicata* Todd and Carriker.

This winter resident, which is, of course, our Wilson's Snipe, ranges in suitable localities from the mangrove border of the Ciénaga Grande, through the fresh swamps of Ciénaga and Río Frio, to the slopes of the Sierra Nevada and up to the páramo zone, where three were seen beside a small lake near 13,000 feet on February 10. The species is nowhere very common, although half a dozen or so birds may sometimes be put up almost together. It was first met with at Sevillano on October 20, when my only specimen, an adult ♀, was collected. It was noted at Río Frio several times in November, but disappeared from this locality during the dry season. It was seen in the fresh swamps at Ciénaga at various times during November, February, and March.

Family CHARADRIIDAE. Plovers

CHARADRIUS COLLARIS Vieillot

CHARADRIUS SEMIPALMATUS Bonaparte

Two or three species of plover occur together on the mud flats along the Ciénaga Grande near Sevillano, where one specimen each of *collaris* and *semipalmatus* were collected October 13. *C. collaris* is the commonest plover locally, but *C. semipalmatus* is not rare during the winter, and *Pagolla wilsonia crassirostris* (Spix) has been recorded from Ciénaga.

BELONOPTERUS CAYENNENSIS CAYENNENSIS Gmelin

An adult ♂ was collected from a flock of four at Aracataca, July 1, and birds were seen occasionally, usually in threes or fours, at Ciénaga and Sevillano. They frequent open wet places such as flood pools,

swamp margins, and wet pastures, and run less and fly more than the smaller plovers. The birds are easily identified by their "prominent foreheads," short occipital plumes, and characteristic screaming notes.

Family ARENARIIDAE. Turnstones

ARENARIA INTERPRES MORINELLA (Linné)

Turnstones were seen only on September 15 on rocky headlands along the sea coast near Donjaca, where a single ♂ was secured. Several flocks of fifteen or twenty birds each were present. The species is an addition to the Santa Marta list.

Family BURHINIDAE. Thick-knees

BURHINUS BISTRIATUS VOCIFER (L'Herminier)

*Oedicnemus bistriatus vocifer* Todd and Carriker.

A single flock of four of these big, fast-running birds was encountered November 24 on a flat, nearly bare plain just at the edge of the Cienaga fresh swamps. An adult ♀ was secured here and seems to be the first specimen of the species collected in the Santa Marta region, although Carriker noted it on the other side of the mountains, at Rio Hacha and Camperucho, in July and August, 1920.

Family JACANIDAE. Jacanas

40. JACANA NIGRA (Gmelin)

The Jacana is abundant in all open wet places, and simply swarms in the fresh swamps at Cienaga. A distinct increase in the number of birds at Rio Frio was noted when the dry season set in. Like the Gallinules and Wood Rails these birds were probably forced to range more widely in search of food at this time, and may have been attracted to Rio Frio by the small marshes which were maintained by overflow from the irrigation canals. White-bellied (immature) Jacanas were seen in every month from October to April.

Family COLUMBIDAE. Pigeons

41. LEPTOTILA VERREAUXI VERREAUXI Bonaparte

*Leptotila verreauxi* is the commonest local game pigeon, and is found in almost every type of habitat from the semi-arid area to the forests

of the plain, and up to at least 2,000 or 3,000 feet in the mountains above Rio Frio. It usually feeds on the ground in pairs or small flocks, but alights in low trees when flushed. It is not particularly shy. During the dry season the birds often scratch about in the dead leaves on the forest floor, so that the hunter must train his ear to distinguish them from the little tinamous.

42. *CLARAVIS MONDETOURA MONDETOURA* (Bonaparte)

A ♀ of *C. mondetoura* was secured near Rio Frio in the wooded valley of the Quebrada Mateo just within the edge of the foothills, March 17, 1929. This seems to be the first record for the Santa Marta region. The bird is said to be rare throughout its range.

43. *CLARAVIS PRETIOSA LIVIDA* Bangs

*Claravis pretiosa* Todd and Carriker.

The Blue Ground Dove is typically a forest bird, but it often feeds on the ground in bushy and overgrown pasture land. In the Santa Marta region the birds are very local. They are not uncommon, however, near the foothills of the Sierra just south of the Rio Frio River, where a pair was collected in October. With the possible exception of *C. mondetoura*, this is the shiest of the smaller local doves.

44. *COLUMBIGALLINA RUFIPENNIS RUFIPENNIS* (Bonaparte)

Small size, reddish coloration, and a gray head distinguish this abundant, ground-feeding dove, which inhabits all sorts of open and semi-open places near Rio Frio. If it were a trifle larger, its confiding habits would make it a favorite game bird with the Colombians, but fortunately it is not considered worth the cost of ammunition. The nests are commonly placed a few feet above the ground in tangled bushes, but one was found in the axil of a leaf on a corn stalk and one tucked into a clump of grass. There is a nesting period in October and November, but I saw at least four pairs of birds mating in December and found a nest with two eggs December 26, while the Smith expedition secured nests at Bonda in April and June.

45. *COLUMBIGALLINA PASSERINA ALBIVITTA* (Bonaparte)

During the rainy months this bird, the smallest and one of the tamest of the local doves, was not seen near Rio Frio, but several small flocks were noted southeast of the town on February 19, March 10,

and April 7. This region had been worked thoroughly during October and November, for it could be reached when only one or two hours were available for collecting, so the bird could hardly have been overlooked at that time. The natural habitat of the species is, of course, the semi-arid area, where it feeds on the ground amid the patches of thorny scrub, but Carriker found it at Fundacion during the rains. Nevertheless, I believe that all the birds at Rio Frio were local migrants from a few miles north. Obviously young birds were seen with adults at Sevillano, October 20, and my only specimen was collected at the same place January 20.

#### SCARDAFELLA SQUAMMATA RIDGWAYI Richmond

The long tail and squamate markings are field characters sufficient to distinguish the *Scardafella* near Santa Marta. The bird is restricted to the scrub of the semi-arid area, where it was first encountered on October 13 near Sevillano. Three individuals were present, one of which, an adult ♂, was collected. A bird was seen at the same locality February 20, and one was noted at Cienaga November 24.

#### COLUMBA GYMNOPHTHALMOS Temminck

*Crossopthalmus gymnophthalmos* Todd and Carriker.

This fine pigeon, easily distinguishable in the field by its white wing mark, is found only in the semi-arid area where cacti and acacia abound. It was fairly common in small flocks at Donjaca, September 15, when an adult ♀ was collected, and was noted also at Cienaga and occasionally as far south as Sevillano. It is usually seen perching on the top of a Giant Cactus or a low tree.

#### 46. COLUMBA SPECIOSA Gmelin

*Lepidoenas speciosa* Todd and Carriker.

One or more small flocks of *Columba speciosa* inhabit the low, dry forest near the foothills of the Sierra Nevada southeast of Rio Frio. An adult ♀ was collected at this place on August 5. This species is extremely shy and is usually flushed from the tops of small trees — indeed it was never seen on the ground. The local name is "Torcáza," while the various other local doves and pigeons are all called "Palóma."

#### 47. COLUMBA RUFINA PALLIDICRISSA Chubb

*Chloroenas rufina pallidicrissa* Todd and Carriker.

This is a large, common, tree-feeding pigeon which ranges in the more open localities from the semi-arid area to the low pastures along



the Aracataca and Fundacion Rivers. It is one of the standard game birds of the region. I was told by reliable observers that it sometimes feeds in huge flocks on the white "uvtas," small, berry-like fruits which are borne on a low tree. The only specimen preserved is an adult ♀ from Cienaga, March 9.

#### Family PSITTACIDAE. Parrots

##### 48. AMAZONA OCHROCEPHALA PANAMENSIS (Cabanis)

##### AMAZONA AMAZONICA AMAZONICA (Linné)

The only *Amazona* which I collected (at Aracataca, July 1) is an *ochrocephala panamensis*, but to judge from Todd and Carriker most of the individuals at Rio Frio must have been *A. amazonica*. Amazons are common over most of the coastal plain between the Sierra Nevada and the Cienaga Grande. In the dry regions they are found in the higher scrub or are seen flying over; further south they are usually met with in forest. Like the macaws they fly in pairs, several pairs often uniting to form a loose flock. The genus is surprisingly scarce in the immediate neighborhood of Rio Frio, but this may be due to the Colombians, who consider the birds excellent eating. The local name is "Loro."

##### AMAZONA MERCENARIA (Tschudi)

The mountain Amazon was common in forest from about 8,000 feet up to tree line below the northwestern páramo of the Sierra Nevada in both July and February.

##### 49. PIONUS MENSTRUUS (Linné)

An abundant, forest-dwelling species which often occurs in flocks of twenty-five or more and is very noisy. Occasionally it enters the outskirts of Rio Frio, but it is too shy to do much damage. An adult ♂ collected near the town June 14 has the front and part of the crown red, the color being asymmetrical.

##### 50. FORPUS SPENGLI (Hartlaub)

*Psittacula spengeli* Todd and Carriker.

This miniature parrot occurs rather sparingly in the forest and semi-open near Rio Frio and in the shade trees of the town, but is commoner in open forest at Aracataca and in the cactus thickets at Sevillano.



An adult ♂ was collected at the latter locality on September 1. For further notes on the local distribution of the species see the introductory discussion of this paper. The birds go in small flocks and may be located by their chattering calls, which are sparrow-like with a parrot quality.

51. BROTOGERIS JUGULARIS JUGULARIS (Müller)

One of the first and most attractive of the tropical birds which the casual visitor will see in the Santa Marta region is this small, orange-chinned, green parrot, which is abundant in the shade and fruit trees of the various towns. It is equally common in the semi-open country, where it is partial to the *Cecropia* tree. It has a variety of chattering notes and a pleasing, two-syllabled whistle. In the spring the birds do much damage to mangoes and *avocates*, which they raid in large, noisy flocks. The flocks are so bold that I have sometimes had to shoot into them three or four times in order to drive them away. This and the other small local parrots are lumped by the Colombians under the name "Períco."

52. ARATINGA PERTINAX AERUGINOSA (Linné)

*Eupsittula pertinax aeruginosa* Todd and Carriker.

This noisy and conspicuous paroquet is common in the semi-arid region and in dry pastures to within three miles of Rio Frio on the north. It was not seen in the immediate vicinity of the town during the rains, but was noted there December 25, January 3, and on various dates in February and March, so that a partial seasonal migration is indicated. The birds usually go in flocks and can be identified at a distance, for none of the other small, lowland parrots have long tails.

ARATINGA WAGLERI (Gray)

In July, several flocks of a small, long-tailed parrot, which could only have been *Aratinga wagleri*, were seen in semi-open country just below the edge of the subtropical forest zone along the mountain trail, some 4,000 feet above Rio Frio.

53. ARA MILITARIS (Linné)

54. ARA CHLOROPTERA Gray

ARA ARARAUNA (Linné)

The blue-green macaw (*A. militaris*) is the common bird of the coastal plain, the red species (*A. chloroptera*) was seen occasionally at

Aracataca and once each at Patuca Farm and Rio Frio, while the blue and yellow bird (*A. ararauna*) was encountered only once, at Patuca Farm. The blue-green species alone ranges into the foothills, where on one occasion I saw thirty-five scattered about the sky and feeding in trees on the wooded ridges. Anyone who is familiar with the birds can imagine the noise they made. All the local macaws are forest birds, almost invariably seen in multiples of two. They are hunted for food by the Colombians, who call them "Guacamáya," with or without distinguishing phrases based on color, and who have named the town of Guacamayál (near Sevilla) after them. I preserved one specimen each of *chloroptera* and *ararauna*, both collected on Patuca Farm, between Tucurínca and Sevilla, March 16, and have identified *militaris* from the description of a bird shot (but not preserved) near Rio Frio, August 3.

#### Family CUCULIDAE. Cuckoos

##### 55. CROTOPHAGA ANI Linné

##### CROTOPHAGA SULCIROSTRIS SULCIROSTRIS Swainson

*C. s. sulcirostris* was noted definitely only twice, once when a ♀ with a fully formed egg in the oviduct was collected in the mangroves near Sevillano, October 20, and once when a bird was seen in bushes by an *acequia* (irrigation ditch) near Aracataca, March 3. The two anis are not easy to distinguish by eye in the field, for it is hard to be sure of the presence or absence of sulci on the beak and the size difference is not great. There can be little doubt, however, that it is *C. ani* which is so abundant locally. It ranges from the Ciénaga Grande to the edge of the foothills and occupies nearly every type of habitat except the heavy forest. The birds are called "Negrito" and "Santa Lucia" by the Colombians, and are so well known that a description of their habits is unnecessary. No nests were seen in Colombia.

##### 56. CROTOPHAGA MAJOR Gmelin

This big ani usually goes in small, shy flocks, which break out in noisy choruses at intervals. The notes are harsh and quite unlike those of the other anis. This is one of the species which was not seen outside of the semi-arid area during the rains, but which appeared near Rio Frio on January 14, and which was noted there repeatedly in February, March and April. During these months a small flock was resident in the trees along the river just above the town, where it could hardly have been overlooked if it had been present earlier in the year. I am,

therefore, reasonably sure that the Rio Frio birds were merely local migrants. All the birds had not left the semi-arid area at this time, however, for several were seen in dry scrub at Sevillano on February 20. The significance of the apparent migration of this and some other species is discussed in the introduction. Only one specimen was collected, at Sevillano, October 20, but the other records are trustworthy, for the bird is quite unmistakable.

#### 57. *TAPERA NAEVIA NAEVIA* (Linné)

The Striped Cuckoo is rarely seen in the Santa Marta region, perhaps because it prefers the densest thickets and is inconspicuously colored. I saw only four individuals: one in a bushy field at 1,500 feet elevation in the foothills above Rio Frio, July 22; an adult ♂ which was collected in an overgrown fence row near the town August 19; a young ♂ collected November 25 in tangled woods near by; and a bird seen calling from an open perch in stump land at Aracataca, March 3.

#### 58. *PIAYA CAYANA COLUMBIANA* (Cabanis)

*Piaya columbiana* Todd and Carriker.

Big Squirrel Cuckoos are common and conspicuous birds in the tangled woods and bushy fields of the plain and lower foothills near Rio Frio. They are by no means shy, and may be seen feeding on the ground as well as in masses of brush and low trees.

#### *COCCYCUA RUTILA GRACILIS* (Heine)

A small, rufous-brown cuckoo was seen in a thicket on the edge of a forest near the Rio Fundacion, below Aracataca, on February 26. It was very tame and was studied at close range. An examination of skins in the Museum of Comparative Zoölogy leaves little doubt that it was this bird, which has been recorded only once before from the Santa Marta region.

#### *COCCYZUS PUMILUS* Strickland

A species which is apparently a swamp dweller, for it was seen only in tangled bushes in the fresh swamps at Cienaga. A tailless individual was collected there on October 6, and two adult females, both with well differentiated eggs in the ovaries, were secured February 27. There seem to be no previous records for the Santa Marta region.

The three Cienaga birds do not differ in size or color from two from Venezuela ("Caicara" and "El Cuji, Estado Lara") in the American Museum of Natural History.

#### 59. COCCYZUS LANSBERGI Bonaparte

I found this cuckoo as rare as previous records would indicate. It was first encountered in June, when a bird was killed in tangled, low forest near Rio Frio. The skin was discarded, for the tail had been shot out and the species was not recognized at the time. A second individual was seen soon afterward in the same locality, and an adult ♀ was collected August 26 in an overgrown pasture near by. No other birds were seen.

#### COCCYZUS AMERICANUS AMERICANUS (Linné)

*Coccyzus americanus* Todd and Carriker.

A single ♀ Yellow-billed Cuckoo was secured November 10 in dry scrub near Cienaga. The date agrees with those of previously published records.

### Family STRIGIDAE. Owls

#### 60. GLAUCIDIUM BRASILIANUM MEDIANUM Todd

This little owl is fairly common in dry forest and semi-open near Rio Frio. It is frequently mobbed by hummingbirds and such species as the ant-bird *Cercomacra nigricans*. It apparently lacks the rattling call of the Cuban *Glaucidium*.

#### 61. PULSATRIX PERSPICILLATA PERSPICILLATA (Latham)

Two Spectacled Owls were seen and one collected in low, dry forest near Rio Frio, October 7, and two were seen again at the same place November 10. The single specimen is an adult ♀.

#### 62. OTUS CHOLIBA MARGARITAE Cory

The two adult males of *Otus choliba* which were secured are referred to *margaritae* merely for the sake of consistency, for that name has been used by Todd and Carriker. One of the birds is in the rufous and the other in the brown phase, and both are distinctly paler than the corresponding phases of the more southern *crucigerus*. They are certainly extremely close to the Central American *luctisonus* Bangs, however,

as is shown by a comparison with the type series of the latter in the Museum of Comparative Zoölogy. Unfortunately the Museum has no adults of typical *margaritae*.

The local Screech Owl is rarely seen, but its call shows it to be a common bird on the coastal plain. It was first seen at Sevilla in June, when two were noted roosting in a bunch of bananas. On October 16, my boy knocked one down with a stone in a yard in Rio Frio, and I shot one in open forest near the town at dusk, January 11. This bird was calling at the time. The call is a short, bubbling chuckle ending in a rather high-pitched, one- or two-syllabled cry.

### Family CAPRIMULGIDAE. Goatsuckers

#### PODAGER NACUNDA MINOR Cory

A loose flock of *at least* forty individuals was discovered September 1 at Sevillano. The birds were roosting on the open ground, in the full glare of the sun, where a broad strip of baked and salt-encrusted earth had been left between the Cienaga Grande and the vegetation of the neighboring desert. They could hardly have found a hotter place. It evidently suited them, however, for they were seen again in the same locality, but in somewhat reduced numbers, during November. A group of five was seen also at Cienaga on November 24, on a sun-baked plain which had been practically denuded by woodcutters. There was a thin mat of vegetation here in places, but the birds alighted indiscriminately on it and the bare ground.

When flushed, these goatsuckers rise uttering a clucking "pow, pow." They fly rather slowly and directly and usually without the zigzagging so characteristic of the family. When they settle again, they sit with their necks stretched up, cluck "pow" once or twice, bobbing each time, and then slowly contract to their usual position, when they are nearly invisible. They often freeze by a piece of dry cow dung or a stick, but never where there is more than the merest carpet of vegetation.

The adult ♀ collected at Sevillano September 1 seems to be the first specimen of the species to be recorded from the Santa Marta region.

#### 63. LUROCALIS SEMITORQUATUS SEMITORQUATUS (Gmelin)

*Lurocalis semitorquatus* is another addition to the Santa Marta list. It was seen over only a single area of freshly cut stump land near Rio

Frio, where an adult ♂ was collected in the evening of November 29. It had been feeding chiefly on small bugs and beetles. Several other birds were present at the same time. From the other local nighthawks this may be distinguished with some certainty by its dark color and short tail, while the beautiful silvery frosting of the greater wing coverts is a good character when the bird is in the hand.

#### 64. *CHORDEILES MINOR ASERRIENSIS* Cherrie

A single adult ♀ of the Aserri Nighthawk, which is also previously unrecorded from the Santa Marta region, was shot from a tree limb in open forest near Rio Frio on the afternoon of April 5. It was very fat. The bird is, of course, a migrant, which is known to breed in central southern Texas and northern Tamaulipas, Mexico.

#### 65. *CHORDEILES ACUTIPENNIS ACUTIPENNIS* (Hermann)

This nighthawk is locally common both in the semi-arid area near Cienaga and in the more humid country at Rio Frio. In the dry area it is occasionally flushed by day from the horizontal limbs of small trees, but near Rio Frio most of the birds appear to spend the day in the lower foothills of the Sierra Nevada. Nevertheless, an individual was flushed from a tree limb in open lowland forest on November 21, and another was seen in the same place February 23. The hill-roosting birds fly out over the coastal plain singly and in small groups just before sunset, hawking at first far out of gunshot, but later congregating and descending to some favored feeding ground. The evening migration from the hills was first noted on February 18, and three days later the first feeding ground was discovered. Here, in an open, wet pasture, bordered by a swamp, scores of the birds were quartering over the short grass and cat-tails, but not over the herd of cattle which was near by. On March 5 the species was again noted coming from the hills to the same pasture, and on different occasions, during March, birds were observed at dusk zigzagging over the town of Rio Frio, over the neighboring grass land and banana lots, and over the Rio Frio River. I have no notes on the occurrence or habits of the species from April through September. Although several specimens were shot, most of them by mistake for other species, time was found to skin only a ♀ from Cienaga, November 17, and a ♂ from Rio Frio, February 21.



## 66. NYCTIDROMUS ALBICOLLIS GILVUS Bangs

By day the Santa Marta Parauque roosts on the ground in thickets or in the forest, where it is often flushed into moth-like flights of a few yards. During the evening it is abundant on paths and dry irrigation ditches in and near woodland. Its habits are too well known to need description here. A single specimen shot at Cienaga, November 27, was sitting crosswise on a small branch, a most unusual position for a goatsucker.

## SYSTELLURA RUFICERVIX (Sclater)

A bird which could have been only *Systellura ruficervix* was flushed from a single egg at an altitude of about 9,000 feet on the northwestern range of the Sierra Nevada de Santa Marta proper, February 12. The egg had been laid beside a log on nearly open ground.

## Family MOMOTIDAE. Motmots

## 67. MOMOTUS MOMOTA SUBRUFESCENS Slater

*Momotus subrufescens subrufescens* Todd and Carriker.

The local motmot is one of the common birds of the Santa Marta region. It is characteristic of bushy lowland forest and second growth, and usually keeps near the ground, but during November several birds were seen high up in *Cecropia* trees. One was noted at the entrance of a hole in the side of a deep irrigation ditch in the forest near Rio Frio in October. The bird's call is a low, bubbling chuckle, of which the Colombian name is an onomatopoeic derivation which may be rendered as "Bruréro," giving each "r" its Spanish value, which is distinct but not rolling, more like our "d" than our "r."

## Family ALCEDINIDAE. Kingfishers

## 68. CHLOROCERYLE INDA (Linné)

A bird which was seen on only two occasions, both times in heavy forest near Rio Frio. An adult ♂ was collected beside a ditch November 13 and an individual was seen along the river at dusk April 9.

## 69. CHLOROCERYLE AMERICANA AMERICANA (Gmelin)

This is a common bird which has the same local range as the next, except that it follows the small *quebradas* (brooks) further into the foothills of the Sierra.

## 70. CHLOROCERYLE AMAZONA (Latham)

Probably the commonest local kingfisher. It is abundant at Cienaga in the fresh swamps, occurs in the mangroves at Sevillano, and is to be found in numbers along the Rio Frio and the neighboring irrigation ditches. *C. amazona* is about the size of a Blue Jay, *C. americana* of a Bluebird, and *C. acnea* (which I did not see but which is known to occur in the Santa Marta region) of a small sparrow, while *Ceryle torquata* is the local giant of the family, and is, therefore, unmistakable. All the species are called "Pescadór."

## 71. CERYLE TORQUATA TORQUATA (Linné)

*Megaceryle torquata torquata* Todd and Carriker.

The Ringed Kingfisher is common along rivers and ditches near Rio Frio. It seems to have no unusual habits except that of traveling cross-country high out of gunshot, which the other species of the family were not seen to do.

## Family BUCCONIDAE. Puffbirds

## MALACOPTILA MYSTACALIS (Lafresnaye)

The only individual seen was an adult ♂ collected in a patch of forest at about 2,500 feet elevation in the foothills above Rio Frio, July 29. All previous local records seem to have been from the San Lorenzo at not below 4,000 feet.

## 72. HYPNELUS RUFICOLLIS RUFICOLLIS (Wagler)

The common puffbird is much more abundant in the dry region north of Rio Frio than in the woodland to the south, but is not rare anywhere. It is usually seen in pairs in scattered trees, open woods, or scrub, and is, of course, very sluggish and tame. It combines the appearance of a stupid kingfisher with habits much resembling those of flycatchers.

## 73. NOTHARCHUS HYPERRHYNCHUS DYSONI (Sclater)

*Notharchus hyperrhynchus* subsp. Todd and Carriker.

Todd refused, entirely on geographical grounds, to refer his Santa Marta specimens of *N. hyperrhynchus* to *dysoni*, a procedure which does not seem worthy of being followed. The species is rare near Rio Frio, but an adult ♀ was shot from the top of a forest tree on June 20, and a bird was seen flying over the same patch of forest in November.

## Family GALBULIDAE. Jacamars

## 74. GALBULA RUFICAUDA PALLENS Bangs

Like the common puffbird, with which I always associate it, this jacamar is most abundant in the drier parts of the plain, but is present wherever there are scattered trees or open woodland. In behavior it is rather flycatcher-like. It is a noisy bird with a peculiar, rigid profile in flight which is unmistakable, although the tremendously long, straight beak, long tail, and metallic green upper parts are in themselves more than sufficient field characters.

## Family RAMPHASTIDAE. Toucans

## 75. PTEROGLOSSUS TORQUATUS NUCHALIS Cabanis

Aracari Toucans are common in small flocks in forest and semi-open country near Rio Frio. Occasionally they enter the town and are seen in *avocate* and mango trees, but they cannot be considered destructive. They have an easily recognized "gasping" note of two syllables run together, not loud.

## 76. RAMPHASTOS SULPHURATUS BREVICARINATUS Gould

The so-called Short-keeled Toucan is less common and more shy than the *Pteroglossus*, perhaps because it is considered *muy sabroso* by hungry Colombians. The species is usually found in small flocks, of from four to a dozen birds, in heavy forest. I have seen it at 4,000 feet in the mountains above Rio Frio, and Carriker found it even higher on the San Lorenzo. A specimen shot June 5 had two botfly larvae under the skin, one on the thigh and one on the body. The toucans are all called "Guasalé" and this species sometimes "Guasalé con Pico Verde," or Green-billed Toucan, a phrase which applies to the bird in life but not to museum skins.

## Family PICIDAE. Woodpeckers

## 77. PICUMNUS CINNAMOMEUS CINNAMOMEUS Wagler

These tiny woodpeckers are rather common, confiding birds which are usually seen singly or in pairs climbing about in tangled vines and brush. They inhabit low forest and second-growth and range from the plains into the low foothills east of Rio Frio. The call is somewhat like

that of a Hairy or Downy Woodpecker but is, of course, not nearly so loud. On March 11, in woods near Rio Frio, four of these birds were driven from a fence post which had a tiny woodpecker hole near the top. On March 13, a flock of five and one single bird were noted in the semi-arid area near Sevillano.

78. *VENILIORNIS KIRKII CECILII* (Malherbe)

The home of this very inconspicuous bird is in the heavy lowland forest, where it usually keeps well up in the trees. The call is a deliberate repetition of several high notes. The species is common.

79. *SCAPANUS MELANOLEUCOS MALHERBII* (Gray)

80. *CEOPHLOEUS LINEATUS MESORHYNCHUS* Cabanis and Heine

These two fine woodpeckers were both frequently encountered in open forest near Rio Frio and were once or twice noted in the shade trees of the town. The *Ceophloeus* is probably the less abundant, but it certainly is not rare. I know that the calls of the two are very different, but cannot describe them except to say that both are loud and "woodpecker-like." These and the other local woodpeckers are all called "Carpintéro" by the Colombians, who sometimes, however, distinguish these birds as "Carpintéro Real."

81. *CHRYSOPTILUS PUNCTIGULA UJHELYII* von Madarasz

Although there have been very few previous local records for *Chrysoptilus ujhelyii*, the species was noted on fully a dozen occasions at Rio Frio, Cienaga, and Aracataca. In the southern part of the region, it probably regularly inhabits open forest, but it seems more at home among the scattered trees in the dry pastures north of Rio Frio at least as far as Cienaga. It was seen also in shade trees in the town of Rio Frio. The call is notably unpugnacious for a woodpecker, and consists of a comparatively deliberate repetition of several soft, rather high-pitched notes. A bird seen October 27 was excavating a hole twenty-five or thirty feet above the ground in a dead tree in rough pasture land.

82. *PICULUS CHRYSOCHLOROS AUROSUS* (Nelson)

*Chloroncrpes chrysochloros aurosus* Todd and Carriker.

On July 8, one of these birds was collected and another apparently of the same species was seen near Rio Frio in a fringe of forest just where the Quebrada Mateo leaves the foothills.

## 83. CENTURUS RUBRICAPILLUS RUBRICAPILLUS Cabanis

A species which will certainly be seen by the ornithologically minded visitor. It is the most abundant woodpecker of the region, and is found in all sorts of semi-open places. It is common, for instance, in the scrub and cactus of the arid area and in the shade trees about the towns. The birds usually go in small, noisy "families." They have the peculiar habit of clinging motionless to an exposed branch, often in a dead tree or a *Cecropia*, during light rains. Nesting sites were noted in a fence post and in Giant Cactus.

## Family TROGONIDAE. Trogons

## 84. TROGON VIOLACEUS CALIGATUS Gould

*Chrysotrogon caligatus columbianus* Todd and Carriker.

The Gartered Trogon is not common near Rio Frio, although it is more frequently seen than the following species. It is usually found singly about half way up in the trees in fairly open forest. It has a five-fold call which is rather cuckoo-like and also a low clucking note which is accompanied by an upward lift of the tail.

## 85. TROGON MELANURUS MACROURUS Gould

*Curucujus melanurus macrourus* Todd and Carriker.

Near Rio Frio this is a scarce bird, usually to be found in pairs in the drier forest. It usually perches within three or four yards of the ground and is very tame. One individual was heard to utter an unmusical, clucking rattle which seemed to be an alarm note, while another confined itself to a low call.

## Family MICROPODIDAE. Swifts

## 86. CHAETURA ANDREI MERIDIONALIS Hellmayr

One specimen, an adult ♂, was secured at Rio Frio on August 8, 1928. It agrees in coloration with birds from Argentina and Brazil, and is just within the maximum size limit given in the original description of *meridionalis*, for the wing measures 135 mm. and the

tail 39 mm. The following specimens of *C. a. meridionalis* have been examined:

No.	Sex	Locality	Wing	Tail
M. C. Z. 99,258	—	Pto. Segundo, Prov. de Misiones, Argentina	128 mm.	38 mm.
Am. Mus. 140,708	♀	Embarcacion, Prov. de Salta, Argentina	122	36
Am. Mus. 140,707	♀	Embarcacion, Prov. de Salta, Argentina	124	36
Am. Mus. 163,159	♀	Bahia, Brazil	132	39 (?)
Am. Mus. 163,160	♀	" "	138	39
M. C. Z. 141,901	♂	Rio Frio, Santa Marta, Colombia	135	39

These measurements agree well with those given by Hellmayr<sup>1</sup> in his paper on the South American swifts. No specimens of typical *Chaetura andrei* have been seen, but the bird inhabits Venezuela and is described as having a wing of from 114.5 to 117 mm.

The capture of a large specimen of *C. a. meridionalis* in northern Colombia not only greatly extends the known range of the race, but at first glance seems to indicate a discontinuous distribution, with typical *andrei* occupying the middle ground. It is possible, however, that *meridionalis* may occur in the intermediate country west of Venezuela, or that it may breed in a different altitudinal zone from *andrei*. It is also possible that individuals of the southern race occasionally migrate to the north, as *Phaeoprogne tapera fusca* Vieillot is thought to do.<sup>2</sup>

On the coastal plain west of the Sierra Nevada flocks of small swifts are to be seen from time to time, although on many days they seem to be completely absent. Several species are probably represented. *Chaetura andrei meridionalis* is, of course, new to the Santa Marta list.

#### 87. STREPTOPROCNE ZONARIS ALBICINCTA (Cabanis)

Big, collared swifts descend a dozen or so times a year to the plains near Rio Frio, during both the wet and the dry seasons, and were noted at Aracataca in February and March. They invariably travel in flocks, which on some days fly far out of range and on others come near the ground. Although a good series could easily be secured on the latter occasions, no attempt was made to get more than a single specimen, an adult ♀, at Rio Frio, November 11. In the foothills, flocks of fifteen

<sup>1</sup> Verh. Ornith. Ges. Bayern, 8, 1908, p. 145.

<sup>2</sup> Chapman, The Auk, 46, 1929, p. 348.



or twenty birds may be seen cruising at high speed over the ridges and valleys and uttering a medley of chattering calls.

Family TROCHILIDAE. Hummingbirds

88. CHRYSOLAMPIS ELATUS (Linné)

Near Rio Frio, in October, this was an abundant species at certain flowers in bushy, forest-bordered fields, but it was not, I think, seen anywhere else. A ♂ with the yellow throat coming in in patches was shot in October, but could not be preserved. The yellow throat, orange-gold cap, and coppery tail of the male make it an unforgettably vivid bird when it is seen poised in sunlight.

89. ACESTRURA ASTREANS Bangs

*Chaetocercus astreans* Todd and Carriker.

The only individual of the minute, short-tailed *C. astreans* which was definitely identified was shot on the edge of a forest beside a field of flowers near Rio Frio, October 16, at less than one hundred feet above sea level. The specimen weighed only 2.30 gm. two and a half hours after death, when the body had probably not dried out much. It is probably a young ♂, for the tail is tipped with white and the back is bluer and the bill more slender than in the female. This record, combined with those of Simons for Atanquez and of the Smith Expedition for Bonda, indicates a more or less regular descent of the species from the mountains to the plain, or at least to the lower tropical zone. From this, and from the scattered localities given by Todd and Carriker for some other species, one gets the impression that there is still a great deal to be learned about the seasonal migrations of several of the local hummingbirds.

90. FLORISUGA MELLIVORA (Linné)

The Jacobin was first seen at wild plantain flowers at about 3,500 feet elevation in the mountains, July 15. This individual was the only one collected. The species was recorded twice near Rio Frio, however, once in September and once in November. The second bird was hovering over an irrigation ditch in a pasture and evidently securing insects from the water surface. The species was locally common in banana lots just north of Sevilla in October.

## HELIANTHEA PHALERATA (Bangs)

In February, on the northwestern slope of the Sierra Nevada above Rio Frio, Bangs' *Helianthea* was fairly common between 6,000 and 9,000 feet. The birds were feeding at the flowers of the bromelias which grew both on trees in the forest and on the ground in bushy meadows.

## 91. CHLOROSTILBON CHRYSOGASTER (Bourcier)

*Chlorostilbon haeberlinii* Todd and Carriker.

As far as field characters go this tiny, glittering-green bird is almost an exact miniature of *Sapphironia coelina*. It probably has similar habits, for males were seen only at flowers in a bushy field near forest, where the larger species was common. A single ♀ was collected in forest near Rio Frio, November 25, and an adult ♂ was secured at the flowers mentioned, October 16.

## SAPPHIRONIA CAERULEIGULARIS DUCHASSAINGI (Bourcier)

*Lepidopyga caeruleogularis* Todd and Carriker.

*Lepidopyga lilliae* Todd and Carriker.

According to Simon in his *Histoire Naturelle des Trochilidae*, this is the proper name to use for the Santa Marta bird with the throat purplish-blue in the male. Two specimens with the blue extended over the abdomen served as the types of *Lepidopyga lilliae* Stone, which is synonymous. The subspecies *duchassaingi* ranges west to Panama, but is replaced by typical *caeruleigularis* farther north. In the Santa Marta region the bird is restricted to the semi-arid area, from which it occasionally invades the mangroves. The blue-bellied phase (*lilliae*) is not restricted to the latter, of course, and I have seen it (although unfortunately I had both barrels loaded for pigeons at the time) in an acacia thicket at the exact locality where a normal, blue-throated male was later collected. Two adult males, with blue only on the throat, were eventually secured at Sevillano on October 20 and January 20. Mr. Bangs suggests that possibly very old birds acquire the entirely blue underparts.

## 92. SAPPHIRONIA COELINA (Bourcier)

*Lepidopyga luminosa* Todd and Carriker.

A forest-dwelling species which is sometimes fairly common near Rio Frio at flowers in bushy fields near woodland. A specimen was taken, too, at Aracataca. In using the name *coelina* for the green-bellied species, I am following Simon.

93. *DAMOPHILA JULIAE JULIAE* (Bourcier)

This is a forest bird of which only two individuals were seen near Rio Frio. Both were secured, a ♂ October 27 and a ♀ November 11. The latter was flushed from a compact, typical hummer's nest in the fork of a bush about four feet above the ground in woodland, and had been brooding two white eggs. These measure  $13 \times 8$  mm.

94. *COLIBRI DELPHINAE* (Lesson)

A species which was noted only at flowers on the edge of forest southeast of Rio Frio. Not more than four birds were seen in all. An adult ♂ was collected October 14.

95. *ANTHRACOTHORAX NIGRICOLLIS NIGRICOLLIS* (Vieillot)

During October males and females of the Black-throated Hummingbird were common at flowers on the borders of forest near Rio Frio. The species was seen occasionally in scattered trees in a swamp near the town, as well as at banana flowers, and one was collected at heliconia flowers at about 2,500 feet elevation in the foothills on July 29. Although the male is distinctively colored, the black and blue of the lower surface do not show up well in the field, so that this sex is likely to be mistaken for the male of *Chalybura b. aeneicauda*. A ♂ molting into the adult plumage was shot at Rio Frio in November, but not preserved. It had narrow white lines still separating the blue and black areas of the ventral surface.

96. *SAUCEROTTIA SOPHIAE WARSCEWICZI* (Cabanis and Heine)

*Saucerottia saucerottei warscewiczii* Todd and Carriker.

Easily the commonest hummer of the region. It seems indiscriminately at home in the banana lots, bushy land, and forest of the plain, and ranges up to at least 3,000 feet in the foothills. It may be seen in numbers at almost any flower which attracts any hummingbirds. The species also feeds on insects, which are frequently secured from the surface of running water by a series of graceful hovering and dipping motions. The "song" consists of two whispering, peeping notes.

97. *AMAZILIA TZACATL TZACATL* (De la Llave)

*Amazilia tzacatl* is another abundant and pugnacious hummer of the banana lots, semi-open, and forest near Rio Frio. By an oversight no specimens were taken, but there can be no doubt of the identification.

## 98. CHALYBURA BUFFONII AENEICAUDA Lawrence

Carriker remarks that this species is always found low down in the forest, but I did not find it so, and it certainly does not approach the habits of *Phaethornis* in this respect. Its habits might more correctly be compared to those of the two preceding species, for none of these birds is specialized in behavior or choice of habitat.

## 99. HELIOMASTER LONGIROSTRIS LONGIROSTRIS (Vieillot)

*Anthoscenus longirostris longirostris* Todd and Carriker.

Mr. Bangs states that the coppery color of the rump, etc., referred to by Todd in the case of a Santa Marta specimen, is probably seasonal, for Brown's specimen lacks it. This species is readily known by its long, nearly straight bill and the white dash on its lower back. It is locally common near Rio Frio, where two specimens were collected on July 8. Both are males, one adult and one apparently nearly so. The birds are often seen in small groups or "families," and usually rest on conspicuous perches such as telephone wires or the exposed twigs of small trees. They prefer semi-open places. Birds were seen in the dry belt near Cienaga November 24, and at an elevation of about 500 feet in the hills above Rio Frio February 17.

## 100. GLAUCIS HIRSUTA AFFINIS Lawrence

Only a few Lesser Hairy Hermits were seen. Most of them were in woods near water, but one or two were at flowers in a bushy field in company with other hummers. Smith's collectors found a nest in May attached to a wild plantain leaf, but the nests which I saw were all fastened to the lower surface of the leaflets of small, thorny palms growing in partial shade near water. One, discovered July 15, was in a mountain valley about 1,500 feet above Rio Frio. It contained two white eggs which measure  $15 \times 9.5$  mm. Another nest, occupied by two young birds, was found near the Rio Frio River above the town in October, but had been destroyed by some unknown agency before November 11. A new nest was being constructed about ten yards from the site of the first at that time, however, and the remains of several old ones were hanging in the neighboring palms. All the nests seen were within six or eight feet of the ground. The bird builds a very coarse, open nest which departs from the usual standards of the family and reminds one a little of the architecture of swifts.

101. PHAETHORNIS ANTHOPHILUS ANTHOPHILUS (Bourcier  
and Mulsant)

This spike-tailed hummingbird usually keeps out of sight in underbrush or dense thickets and only occasionally visits flowers in semi-open places. The species ranges to an elevation of at least 1,000 feet in the foothills above Rio Frio, and was seen at Aracataca March 23. It is a very shy bird, invariably seen near the ground, but is fairly common and may be located with a little practice by its call, which is sharper than that of the average hummer.

## Family DENDROCOLAPTIDAE. Woodhewers

## 102. DENDROCIINCLA MERULOIDES LAFRESNAYEI Ridgway

*Dendrocincla lafresnayei lafresnayei* Todd and Carriker.

A single "family" of the thrush-like *Dendrocincla lafresnayei* was seen in heavy forest near Rio Frio, August 26. The birds uttered a sharp alarm note, kept near the ground, and were not shy. The only other individual seen was collected at the same place December 30.

103. CAMPYLORHAMPHUS TROCHILIROSTRIS VENEZUELENSIS  
(Chapman)

Two specimens only were seen and secured, an adult ♂ on September 2 and another on October 1. Both were in the heaviest lowland forest left near Rio Frio, and were climbing the trunks of large trees. No special use for the very elongate bill was noted. The only previous local record for the species seems to be for two birds taken at Valencia, south of the Sierra, by Carriker.

## 104. LEPIDOCOLAPTES SOULEYETII LITTORALIS (Hartert and Goodson)

*Thripobrotus albolineatus* Todd and Carriker.

This, the smallest local woodhewer, is usually seen high up in forest trees, often on lateral limbs. It ranges to an elevation of at least 1,000 feet in the foothills near Rio Frio. It is fairly common.

## 105. XIPHORHYNCHUS GUTTATUS NANUS (Lawrence)

*Xiphorhynchus nanus nanus* Todd and Carriker.

Lawrence's Woodhewer is a common forest species which is usually found climbing on the central trunk of a tree rather than on the limbs.

Its call is one of the characteristic forest sounds, and is a "Wick — wick — wick — wick — wick — wick," very loud and not fast.

106. *DENDROPLEX PICIROSTRIS PICIROSTRIS* Lafresnaye

The center of abundance of this pale-throated woodhewer is in the semi-arid area to the north of Rio Frio, but the species is common enough in low forest and semi-open near the town. It was seen at Aracataca March 3, at Cienaga March 9, and at Santa Marta January 7.

Family FURNARIIDAE. Ovenbirds

107. *SYNALLAXIS ALBESCENS ALBIGULARIS* Sclater

Perhaps half a dozen *Synallaxis* were seen in all. Two were near Rio Frio, where an adult ♂ was obtained September 30, and the rest were at Cienaga on February 27 and March 9. All were in bushes or low thickets in dry, overgrown pasture land, but the Cienaga birds were within a few yards of the swamp.

*CERTHIAXIS CINNAMOMEUS FUSCIFRONS* (von Madarasz)

*Leptozyura cinnamomea fuscifrons* Todd and Carriker.

Abundant in the rank vegetation of the swamps at Cienaga and Aracataca, and seen once at Patuca Farm. It occurs also in the mangroves along the Cienaga Grande at Sevillano. For some inexplicable reason it was never seen at Rio Frio, although the swamps there seem in every way suitable. The bird has several scolding notes, as well as a long rattle which is a characteristic marsh sound. The nest is a domed structure of thorny twigs with a long entrance tunnel. The one I saw was near Cienaga, placed on a low tussock surrounded by flood water, October 6, and was occupied.

108. *XENOPS MINUTUS NEGLECTUS* Todd

*Xenops genibarbis neglectus* Todd and Carriker.

The *Xenops* is found in the same sort of place as the little piculet (*Picumnus*) and is about equally common and tame. It is usually seen climbing silently about in the vines and bushes of the forest or second-growth.



109. *FURNARIUS LEUCOPUS LONGIROSTRIS* von Pelzeln

*Furnarius leucopus exilis* Todd and Carriker.

The common local ovenbird, which looks like a short-tailed, brown thrush, is abundant in semi-open country north of Rio Frio, but is less often encountered near the town. It is often seen in pairs on the ground or on dirt roads, near water. The birds are very noisy and sometimes scold in a duet much like that of the wren genus *Helcodytes*, although they do not keep time as well as the latter.

## Family FORMICARIIDAE. Ant-birds

110. *MYRMECIZA LONGIPES PANAMENSIS* Ridgway

A species which is found on the ground in forest undergrowth, often in pairs, and which is very tame. The characteristic call is a slightly descending series of non-liquid notes, given so fast that it is almost a rattle, but the species has also a harsh, scolding chatter. The bird is abundant near Rio Frio.

111. *CERCOMACRA NIGRICANS* Slater

Whenever a group of birds gathers to mob a hawk or an owl, *Cercomacra nigricans* is almost sure to be present, especially if the action takes place in brushy forest. At other times the birds are found in pairs or "families," sometimes in tall trees and sometimes in the underbrush, but never walking about on the ground like the *Myrmeciza*. Two or more birds sometimes break out together into a series of harsh chatters, a habit which, as in the case of *Furnarius leucopus longirostris*, may be compared to that of the *Helcodytes* wrens, and which may be the first step in the development of an antiphonal song. An immature ♂ in gray plumage was collected October 28 and another was seen a few days later. The first was accompanied by an adult.

112. *NEORHOPIAS GRISEA INTERMEDIA* (Cabanis)

*Microrhophias intermedia* Todd and Carriker.

Little, gray and black *Neorhophias* are common in brush land near Rio Frio. They are usually found in pairs low down in the bushes, and are very tame. They resemble warblers of the genus *Dendroica* both in appearance and in behavior.

113. *THAMNOPHILUS NIGRICEPS* Sclater

A fairly common bird in forest and overgrown land near Rio Frio. It is usually seen in pairs low down, but not on the ground, and seems to be less active than the other local ant-birds.

114. *THAMNOPHILUS DOLIATUS NIGRICRISTATUS* Lawrence

*Thamnophilus radiatus nigricristatus* Todd and Carriker.

The Black-crested Antshrike is a bird which lives in the very densest thickets, ranging from the lowlands up to at least 2,000 feet in the Rio Frio foothills. It is common but not easy to find until one learns its call, which is a series of progressively lower whistled notes ending in a distinct squawk, and which I heard given only by the male.

115. *SAKESPHORUS MELANONOTUS* (Sclater)

A species which, near Rio Frio, is probably confined to the foothills, for the only pair seen was secured there. The ♂ was shot December 23, perhaps 200 feet above sea level; the ♀ was shot September 15, about 1,000 feet up. Both were in bushes in open forest.

116. *SAKESPHORUS CANADENSIS PULCHELLUS* (Cabanis and Heine)

*Sakesphorus pulchellus* Todd and Carriker.

The only specimen secured, an adult ♂, was shot in a thicket at Aracataca, July 1. The species was seen occasionally in bushy places at Rio Frio and once in arid scrub at Sevillano, but was nowhere common. Like its relatives, it is found in the shrubs rather than on the ground.

## Family COTINGIDAE. Cotingas

117. *ERATOR INQUISITOR ALBITORQUES* (Du Bus)

The *Elator* is a scarce bird near Rio Frio. It occurs singly or in pairs, usually well up in the trees on the edge of forest.

118. *PACHYRHAMPHUS POLYCHROPTERUS CINEREIVENTRIS* Sclater

During the fall this cotinga was noted near Rio Frio as "scarce, solitary, and apparently silent, in forest, usually about half way up in the trees." In November, however, a "family" group was seen in forest south of the town. The birds were located by their low alarm notes.

119. *PACHYRHAMPHUS CINNAMOMEUS MAGDALENAE* Chapman

A single ♂ was collected in a forest tree near Rio Frio on December 30, but no other individuals were ever seen near the town. Several brown *Pachyrhamphus* were noted in open forest near Aracataca March 3. They may, however, have been *P. rufus* (Boddaert), for to judge from Todd's remarks (in *The Birds of the Santa Marta Region*) females of *rufus* would scarcely be distinguishable in the field from *P. cinnamomeus magdalenae*.

120. *ATTLA SPADICEUS PARVIROSTRIS* Allen

*Attila parvirostris* Todd and Carriker.

An *Attila* was secured at an elevation of about 1,000 feet in the foothills above Rio Frio February 17. It was in forest in a brook valley. Two were seen February 24 in a similar place beside the Rio Frio River at an altitude of 500 feet. The birds were behaving like flycatchers. The specimen secured is an adult ♂ in wholly rufescent phase, with only the chin, lower belly, and under tail coverts pale, and the lower rump and upper tail coverts yellow. In referring this specimen to *A. parvirostris* it is being assumed that *A. rufpectus* Allen, described from the Santa Marta region, is based upon an individual color variation of no taxonomic significance.

## Family PIPRIDAE. Manakins

121. *CHIROXIPHIA LANCEOLATA* (Wagler)

A common bird in forest underbrush, where it often occurs in small flocks. The flight is much less noisy than that of the *Manacus*. The call is a clear, one- or two-syllabled whistle, and there are also two types of rather harsh, unmusical alarm notes, with a rattling or vibrating quality.

122. *MANACUS MANACUS ABDITIVUS* Bangs

This little, white-bearded manakin is another species characteristic of forest underbrush. Its wings make a purring sound in flight, but the bird does not move as fast as the sound would suggest. The call notes are a loud rattle and a cracking or snapping sound.

## Family TYRANNIDAE. Flycatchers

*MUSCIVORA TYRANNUS* (Linné)

The first *Muscivora* were encountered September 15 at Donjaca, where moderate flocks were observed flying south along the coast.

This probably indicated the arrival of a migrant population, although some individuals of this species are said to be resident in the Santa Marta region. Later in the season the flocks disappeared, but single birds and small groups were common in the semi-arid area at Sevillano and Cienaga during the winter. The species was not seen at Rio Frio but was noted March 3 at Aracataca. It seemed to be rare everywhere in the the more humid parts of the plain, however.

123. TYRANNUS CURVIROSTRIS CURVIROSTRIS (Hermann)

*Tyrannus curvirostris* is a West Indian kingbird which was seen from time to time near Rio Frio during the dry season or winter. One, sex not determined, was collected near the town, December 3.

124. TYRANNUS MELANCHOLICUS CHLORONOTUS Berlepsch

Lichtenstein's Kingbird looks rather like a large *Myiarchus* in the field. It is a common and conspicuous resident of scattered trees and open woodland, and ranges over the entire plain, including both the semi-arid and humid areas, and up to at least 1,500 feet in the mountains. The song is an ascending series of trilled notes, totally unlike anything which I have heard from the other kingbirds.

125. TYRANNUS TYRANNUS (Linné)

Kingbirds which seemed to be of this species were seen in large flocks flying south along the coast at Donjaca, September 15. Later in the year the flocks move on or break up, but some, at least, of the birds remain, for small groups of half a dozen or so were seen from time to time at Rio Frio. From one of these, an adult ♂ was secured on September 16.

126. PITANGUS SULPHURATUS RUFIPENNIS (Lafresnaye)

The common *Pitangus* is one of the dominant birds of the coastal plain. It is found in open and semi-open country, and is noisy and very conspicuous. In habits it is a typical flycatcher.

127. MEGARYNCHUS PITANGUA PITANGUA (Linné)

The Boat-billed Flycatcher is a fairly common, noisy, and conspicuous bird in semi-open places near Rio Frio.

## 128. MYIARCHUS TUBERCULIFER TUBERCULIFER (d'Orbigny and Lafresnaye)

Its small size distinguishes *Myiarchus tuberculifer* from the other local representatives of the genus. Only a few individuals were seen. They were all in a forested brook valley in the edge of the Rio Frio foothills, where an adult ♀ was secured March 15.

## 129. MYIARCHUS FEROX PANAMENSIS Lawrence

## 130. MYIARCHUS TYRANNULUS TYRANNULUS (Müller)

## 131. MYIARCHUS CRINITUS CRINITUS (Linné)

The larger species of *Myiarchus* are difficult to distinguish in the field, especially as they all have the same habits. They are found in open woodland and scattered trees and together are very abundant. *M. f. panamensis* is apparently the common bird near Rio Frio, but *M. t. tyrannulus* was shot there August 12, and a specimen of *M. c. crinitus*, which is, of course, our Crested Flycatcher and a winter resident, was secured November 11.

## 132. SAYORNIS NIGRICANS LATIROSTRIS (Cabanis and Heine)

*Sayornis latirostris fumigatus* Todd and Carriker.

The local Phoebe is common wherever there is swiftly running water, which is chiefly in the foothills of the Sierra Nevada. Its behavior is very much like that of our New England Phoebe. It continues to inhabit the beds of the *quebradas* or small brooks during the dry season, when the flow almost completely stops, provided there are open pools left here and there.

## 133. EMPIDONAX TRAILLII TRAILLII (Audubon)

*Empidonax traillii brewsteri* Todd and Carriker (?).

Traill's Flycatcher appeared to me to be common during the winter season in open forest, but I may have mistaken other species for it in some cases. Mr. Bangs says that he believes the adult (sex not determined) collected September 30 at Rio Frio belongs to the eastern race *traillii*. He agrees with Todd, however, that the eastern and western forms are not surely distinguishable in worn plumage.

## 134. CNEMOTRICCUS FUSCATUS CABANISI (Leotaud)

*Empidochanes fuscatus cabanisi* Todd and Carriker.

A small flycatcher with rufous wing bars, which was secured in forest near Rio Frio September 4, proves to be a ♀ of this species.

135. *PIPROMORPHA OLEAGINEA PARCA* (Bangs)

Bangs' *Pipromorpha* is fairly common in forest near Rio Frio. An adult (♂ ?) which was shot November 25 had a curious, tuber-like growth on the chin, and another individual with a similar deformity was seen a few days later. The growth on the first bird was unfeathered, trilobed, and with a minute puncture in the apex of each lobe. It dried up and nearly disappeared in the skin.

136. *MYIOZETETES SIMILIS COLUMBIANUS* Cabanis and Heine

"Family" groups of the common *Myiozetetes* are often encountered in fringes of woodland or scattered trees near or over swamps and rivers. The birds have a noisy call with a peculiar, squealing quality. A nest with young birds calling in it was noted March 17 in a cleft in a low cliff on the river bank near Rio Frio. Another nest was seen from a distance in a bush in the same sort of locality in early April. It was made of grass or similar stuff and was domed over.

137. *ELAENIA GAIMARDII MACILVAINII* Lawrence

A single specimen, an adult ♀, was collected in heavy forest near Rio Frio on March 7.

138. *ELAENIA FLAVOGASTER FLAVOGASTER* (Thunberg)

One or more small flocks inhabit the fresh swamps near Rio Frio, where they are usually to be found in the scattered trees above the cat-tails.

*SUBLEGATUS MODESTUS GLABER* Sclater and Salvin

*Sublegatus glaber* Todd and Carriker.

A species which resembles a very small *Myiarchus* in the field, and which was seen only in the dry scrub at Sevillano. An adult ♂ was secured there January 20.

139. *INEZIA SUBFLAVA INTERMEDIA* Cory

*Inezia caudata intermedia* Todd and Carriker.

140. *TOLMOMYIAS SULPHURESCENS EXORTIVUS* (Bangs)141. *TOLMOMYIAS FLAVIVENTRIS AURULENTUS* (Todd)

These three flycatchers are all small, plain birds which were secured in woodland near Rio Frio.



142. *ATALOTRICCUS PILARIS PILARIS* (Cabanis)

So small and inconspicuously colored a bird as the Pigmy Flycatcher would easily be overlooked if it were not common and did not have an unexpectedly loud chipping note. It is usually found in "families," and stays near the ground in open forest and bushy places.

143. *TODIROSTRUM SYLVIA SUPERCILIARE* Lawtence

Only one individual of this minute bird was seen. It was collected in forest underbrush near Rio Frio on February 23.

144. *TODIROSTRUM NIGRICEPS* Sclater

Tiny, black-capped Tody Flycatchers are not rare in the forest and semi-open near Rio Frio. They may easily be located by their calls, which are successions of loud chipping notes entirely out of proportion to the size of the birds. The species is sometimes seen, or more often heard, high up in the tree tops, but is found in bushes and undergrowth as well.

145. *TODIROSTRUM CINEREUM CINEREUM* (Linné)

This species seems to be most at home in the swamp shrubbery at Cienaga and in the mangroves at Sevillano, but an individual was shot at Rio Frio on June 12. This was, I think, the only one seen there. It was climbing about in the twigs of a small tree in a pasture, and uttering a fine, insect-like peeping note at intervals. A very young bird accompanied by two adults was seen in a tree over a cat-tail swamp at Cienaga March 9.

*MACHETORNIS RIXOSA FLAVIGULARIS* Todd

*M. r. flavigularis* is a common inhabitant of the semi-arid area, in which it ranges as far south as Sevillano. Its range apparently does not include Rio Frio, however. It prefers fairly open places, and has the curious habit, for a flycatcher, of feeding largely upon the ground.

*ARUNDINICOLA LEUCOCEPHALA* (Linné)146. *FLUVICOLA PICA* (Boddaert)

These two small flycatchers have mutually similar habits and are almost exclusively swamp dwellers, being rarely found more than a few yards from standing water. Occasionally, however, they are to be seen near rivers (Rio Fundacion, March 2), and in Trinidad I have

seen *F. pica* hawking from low perches in a dry field. Both species always stay near the ground. In the Santa Marta region the *Fluvicola* is abundant and the *Arundinicola* scarce. Both occur in the mangroves at Sevillano and the marshes at Cienaga, and the former is common at Aracataca. Neither was ever secured at Rio Frio, but the *Fluvicola* was seen there once or twice. Two nests of this bird were found at Cienaga in November. They were placed in cat-tails about a yard above the water and were small, domed structures of grassy material, without elongate tunnel entrances.

Both *F. pica* and *A. leucocephala* are unmistakable among the local flycatchers, for the former is marked by large patches of black and white, and the latter is black with a white head.

#### Family MIMIDAE. Mockingbirds

##### MIMUS GILVUS COLUMBIANUS Cabanis

The local *Mimus* is one of the few species which is abundant in the semi-arid area and which ranges south to within about three miles of Rio Frio, but which apparently never straggles to the town. It seems to be a perfectly typical mockingbird in its song and habits.

##### DUMETELLA CAROLINENSIS (Linné)

A single adult ♀ of our northern Catbird was secured as it was skulking in bushes beside one of the fresh swamps at Cienaga, March 23, 1929. This seems to be the first record for South America.

##### 147. DONACOBIVS ATRICAPILLUS BRACHYPTERUS von Madarasz

This curious bird is characteristic of the fresh swamps near Aracataca and Rio Frio, but is scarce in those at Cienaga. It spends most of its time low down in the dense aquatic vegetation, where it reveals its presence by a variety of noisy calls. The song is a harsh but beautifully timed antiphonal affair, which I have watched repeatedly, for the birds are tame and often leave cover to sing in pairs from exposed perches. In its habits *Donacobius* seemed to me much more like a wren than a mockingbird, and it shares the habit of antiphonal singing with at least one species of *Heleodytes*.

#### Family TURDIDAE. Thrushes

##### 148. TURDUS GRAYI INCOMPTUS (Bangs)

In the Santa Marta region this plainly colored thrush more or less takes the place of our Robin, although it is a more retiring bird and

stays more in the trees. It is also more fond of open woodland than the Robin is. The song is very Robin-like, and, similarly, is often heard in the early morning and evening.

149. *HYLOCICHLA MINIMA ALICIAE* (Baird) ?

Migrant thrushes, which were probably the present species, were fairly common in low forest south of Rio Frio during the fall, but not a single bird was seen during the months from December to April, inclusive. This probably indicates some sort of local migration in search of food. Unfortunately no specimens were collected.

*CATHARUS MELPOMENE AURANTHIROSTRIS* (Hartlaub)

Several were seen and one secured in forest undergrowth well up on the "Cerro La Aguja," about 2,000 feet above Rio Frio, June 17.

Family SYLVIIDAE. Gnatcatchers, etc.

150. *RAMPHOCAENUS RUFIVENTRIS SANCTAE-MARTHAE* Sclater

The only two of these long-billed, wren-like birds which were surely identified were collected in underbrush and low forest near Rio Frio on September 19 and March 15. Both are adult males.

151. *POLIOPTILA BILINEATA BILINEATA* (Bonaparte)

Several gnatcatchers, from among which an adult ♂ was secured, were seen in the tops of tall trees in open forest southeast of Rio Frio, October 12. The song or call was a "Chip — chip — chip . . ." of about nine syllables, and was as slight and unassuming as the size of the bird would suggest. Two individuals were noted near the same place on February 23.

Family TROGLODYTIDAE. Wrens

152. *THRYOPHILUS LEUCOTIS LEUCOTIS* (Lafresnaye)

*T. leucotis* is a common species in forest and second-growth along the Rio Frio River. Its song is often delivered from well up in bushes or low trees, and is a repetition of several gulping syllables, somewhat reminiscent of the song of the Maryland Yellow-throat (*Geothlypis trichas*). This wren seems to be less noisy than the others.

153. *THRYOPHILUS RUFALBUS MINLOSI* Berlepsch

The bird is at once a great scold and a magnificent singer, with a very sweet, clear song of several loud, deliberate notes. The song is usually delivered from a perch a few yards above the ground in some dense thicket. The species is common in second-growth and forest from Rio Frio up to at least 1,000 feet in the hills near the town.

154. *TROGLODYTES MUSCULUS ATOPUS* Oberholser

The Santa Marta House Wren is a common bird which seemed to me to behave exactly like its New England relative and to live in the same sort of places, except that it was abundant in the cactus and acacia scrub of the semi-arid area as well as in the more humid country.

155. *PHEUGOPEDIUS FASCIATOVENTRIS FASCIATOVENTRIS* (Lafresnaye)

In my experience the Band-bellied Wren occurs, not very commonly, in scrubby forest. It usually goes in small, noisy "families" *not* near the ground, but twenty or thirty feet up, in bushes and low trees. It is a great chatterer. These notes differ considerably from those given by Carriker, a circumstance which is probably due to the scarcity of the bird in question, and to the comparatively few times it was observed. An adult ♂ was secured near Rio Frio August 5.

*HELEODYTES PARDUS* (Bonaparte)

*Heleodytes nuchalis* Todd and Carriker.

*Heleodytes pardus* is a common bird in the dry scrub near Cienaga, where it seems to replace *H. curvirostris*. Todd and Carriker record it from the humid area below Aracataca, but none was seen at Rio Frio. The bird thus has the same curious local range (including the very driest and very wettest parts of the plain) as *Crotophaga major*, but it apparently does not migrate as the latter does. A nest at Cienaga which was claimed by this wren consisted of a loose mass of grassy material, domed and with an entrance tunnel, and placed in the top of a low thorn tree. The single specimen collected is an adult ♀ from Cienaga, October 6.

156. *HELEODYTES CURVIROSTRIS* (Ridgway)

This spotted wren is common enough in forest and second-growth near Rio Frio. It occurs both in the underbrush and in tall trees. The birds go in "family" groups which break out in series of harsh chatters

as if at a signal, but I did not hear them sing antiphonally. Perhaps the habit of chattering in chorus may have led to the antiphonal singing in this genus. The species was seen at Patuca Farm in January. The white background of the belly of *H. pardus* and the buffy one of *H. curvirostris* are easily distinguishable in the field.

157. HELEODYTES MINOR ALBICILIUS (Bonaparte)

Few birds are more in evidence or more pleasing to the visitor in the Santa Marta region than this big wren, which is characteristic of all sorts of semi-open country and forest fringes in both the semi-arid and humid parts of the coastal plain. It is an aggressive and "successful" species, very common near houses, and occasionally destructive to mangoes and *avocates*. It feeds both on the ground and in trees. It is not at all shy, and is one of the few species which had been bold and clever enough to learn to glean insects under the electric lights early in the morning. The birds have a harsh but well timed antiphonal song which they sing in pairs and which is often heard, and they round out their vocabularies with a variety of scolding notes and family chatterings. The nests are large, domed structures of loose, grassy material, and were seen in the outer branches of large, isolated trees in March.

Family CORVIDAE. Jays, etc.

158. CYANOCORAX AFFINIS AFFINIS Pelzeln

Abundant in forest and semi-open near Rio Frio and up to at least 5,000 feet in the neighboring mountains. The species feeds in trees in small flocks. It is often seen in company with *Ostinops decumanus melanterus* Todd, which it rivals in its variety of calls. One of the commonest of the latter gives it its local name of "Chow-chow." The Colombians consider the bird good eating.

Family VIREONIDAE. Vireos

159. CYCLARHIS FLAVIPECTUS CANTICUS Bangs

*C. f. canticus* is an aberrant vireo with a distinctive, stout bill. It is common near Rio Frio in open forest and second-growth, and is usually found about halfway up in the trees. It is much less active than the typical members of the family. The song is loud and clear, much like that of the Red-eyed Vireo, but a little more deliberate and with the separate "bursts" of song a little longer.

160. *PACHYSYLVA AURANTIFRONS AURANTIFRONS* (Lawrence)

161. *PACHYSYLVA FLAVIPES FLAVIPES* (Lafresnaye)

These two inconspicuous vireos were collected in woodland near Rio Frio on November 11 and October 7 respectively.

162. *VIREO FLAVOVIRIDIS FLAVOVIRIDIS* (Cassin)

*Vireosylva flavoviridis flavoviridis* Todd and Carriker.

A species which feeds in small bands in the tops of certain low forest trees. It is rather shy but not rare at the right season. I noted it only during the winter, and secured a specimen (sex not determined) on October 11, at Rio Frio.

#### Family HIRUNDINIDAE. Swallows

##### IRIDOPROCNE ALBIVENTER (Boddaert)

*I. albiventer* is frequently encountered, a few birds at a time, along the Cienaga Grande near Sevillano and in the Cienaga fresh swamps. A few were seen also over the Fundacion River, March 2. One specimen was collected, an adult ♂ taken at Sevillano January 20.

##### HIRUNDO RUSTICA ERYTHROGASTER Boddaert

During the fall Barn Swallows were abundant near the fresh swamps of Cienaga and along the Cienaga Grande at Sevillano. Flocks of twenty or thirty birds were commonly seen. The species was *not* seen at Sevillano on January 20, however, and was not met with again anywhere until April 13 at Cienaga. This, combined with the past records given by Todd and Carriker, seems to indicate that the species is only a migrant, not a winter resident, in the Santa Marta region. A single specimen, an adult ♂, was collected at Sevillano on October 20.

163. *STELGIDOPTERYX RUFICOLLIS AEQUALIS* Bangs

Swallows of this species are fairly common near Rio Frio, where they are usually seen in pairs, threes, or fours hawking in open places. Freshly cut stump land is a favorite feeding ground.

164. *PHAEOPROGNE TAPERA TAPERA* (Linné)

Several Tree Martins were seen and one, an adult ♀, secured over the Fundacion River near Aracataca, March 2. Two were seen at



close range on the railroad bridge over the Rio Frio River in early April, and others which appeared to be of the same species were occasionally noted near the town. Santa Marta birds belong, of course, to the unspotted northern race. There seem to be no previous records for the region.

Family MNIOTILTIDAE. Wood-warblers

165. *BASILEUTERUS DELATRII MESOCHRYSUS* Sclater

I saw Sclater's Warbler only along the Quebrada Mateo in the edge of the foothills near Rio Frio. It was found in the underbrush of the deciduous forest on the brook banks, usually in pairs. The birds often revealed their presence by their fairly loud scolding notes.

166. *SETOPHAGA RUTICILLA* (Linné)

Redstarts are abundant near Rio Frio during the winter. They behave as they do in the North, and frequent as far as possible the same sort of habitat. An adult ♂ was secured at Rio Frio on October 11.

167. *SEIURUS NOVEBORACENSIS NOVEBORACENSIS* (Gmelin)

The Northern Water Thrush is a common winter resident which is to be found feeding on the ground along the banks of swiftly flowing streams, usually in woodland. It is very shy and flies long distances when flushed. This is probably the species which occurs commonly in the mangrove swamps at Sevillano, but since my only specimen, an adult ♂, is from Rio Frio, October 1, I cannot be sure.

168. *SEIURUS MOTACILLA* (Vieillot)

A single adult ♂ Louisiana Water Thrush was collected from a tree on the edge of dry woods near Rio Frio on December 4.

169. *OPORORNIS PHILADELPHIA* (Wilson)

No specimens of this, the Mourning Warbler of the North, were preserved, but the species has been identified from the description of an adult ♂ shot near Rio Frio on November 29. Other birds were seen occasionally during the winter. They were usually near the ground in low, bushy forest.

170. *OPORORNIS AGILIS* (Wilson)

A bird which was almost certainly an adult ♂ Connecticut Warbler was shot in a dry thicket near Rio Frio in October. The specimen was

hopelessly ruined during skinning and, unfortunately, was discarded. In view of the rarity of the species in South America this record must be considered doubtful, but is included here to complete the list of birds noted at Rio Frio.

171. *OPORORNIS FORMOSUS* (Wilson)

Kentucky Warblers are scarce near Rio Frio, but a ♂ was secured there on October 28. They occur, of course, only during the winter, and are usually found near the ground in low, tangled forest.

172. *DENDROICA STRIATA* (Forster)

*Dendroica striata* has a peculiar local distribution. It was found in numbers in weeds and low bushes in a dry clearing southeast of Rio Frio in October (one secured October 11), and a few birds were seen in open woodland near by. During the same month it was present also in the mangroves at Sevillano (one collected October 13), where it was temporarily the commonest perching bird with the exception of *Protonotaria citrea*. It was not seen in any other place, and disappeared from the entire region during December, January, February, and March.

173. *DENDROICA AESTIVA AESTIVA* (Gmelin)

Our Yellow Warbler is abundant during the winter season in the same sort of places that it favors in the North.

*DENDROICA CORONATA CORONATA* (Linné)

A (♀ ?) Myrtle Warbler was collected in dry scrub at Cienaga on March 23, 1929. Two individuals had been seen in the edge of a cat-tail swamp near the same place a few days before. There appear to be no previous South American records for the species. The bird collected was very fat.

174. *COMPSOTHLYPIS PITIAYUMI ELEGANS* Todd

A forest dweller with habits and song something like those of the Parula Warbler, *Compsothlypis americana*. It is a rare species on the plain near Rio Frio, but is fairly common in the edge of the foothills a mile or so to the east.

*ATELEODACNIS BICOLOR* (Vieillot)

I saw this resident warbler only in October, in the mangroves near Sevillano. Carriker, too, found the species only in the mangroves along the Cienaga Grande.

## 175. ATELEODACNIS LEUCOGENYS LEUCOGENYS (Lafresnaye)

*Ateleodacnis leucogenys* Todd and Carriker.

The little, bluish *Ateleodacnis* is common in open forest in the neighborhood of Rio Frio. It usually feeds about halfway up in the trees, but sometimes descends to the tops of tall weeds in new clearings.

## 176. VERMIVORA PEREGRINA (Wilson)

A single ♂ was collected November 11 in woodland at Rio Frio.

## 177. PROTONOTARIA CITREA (Boddaert)

The Prothonotary Warbler swarms during the winter in the mangroves at Sevillano and in the fresh swamps at Cienaga. It was seen also in bushes on the sea beach at Donjaca September 15, and along the Rio Frio River in the edge of the foothills, where it was especially common in February. The birds usually occur near water, but numbers were noted again and again in yellow-flowering, acacia-like trees on the border of stump land and dry forest, far from water. The only specimen collected is an adult ♂ from Donjaca September 15.

## 178. MNIOTILTA VARIA (Linné)

Near Rio Frio Black and White Warblers are scarce winter residents. They are usually met with singly in open forest, sometimes high in the trees and sometimes low down. On February 17 one was seen at an elevation of about a thousand feet in the foothills. One specimen was collected, an adult ♂, from Rio Frio on September 30.

## Family COEREBIDAE. Honey-creepers

## 179. COEREBIA LUTEOLA LUTEOLA (Cabanis)

*Coereba lutcola* is abundant in every type of habitat about Rio Frio except in heavy forest and grassy fields, and it sometimes enters these. The song is a little, vibrant, insect-like affair which varies greatly in different individuals, and which is sung continually. The birds feed like warblers (*Dendroica*) in "families" in bushes and low trees. They are very tame. The nests are neat, domed structures of grassy and fibrous material, often placed near the ground in bushes or fences, and very frequently built into bunches of bananas. It is unlikely, however, that the birds usually have time to raise a brood before the bananas are cut. Nests were seen in the spring and in November, and a bird was flushed

from an empty nest in a bush of the terrible "Pringamósa" nettle (*Jatropha urens* L.) early in January. These honey-creepers were very common at flowers, with hummingbirds, in October and November.

180. *DACNIS COEREBICOLOR NAPAEA* Bangs

The adult males are black and bright blue, the females nearly plain green. Only four birds were seen in all, two in a giant forest tree near Rio Frio, October 12 and February 23, and two in a low tree in open forest, September 9.

181. *CYANERPES CYANEUS EXIMIUS* (Cabanis)

*Cyanerpes cyaneus* Todd and Carriker.

A single specimen was secured December 25 in a tree in open forest at Rio Frio. It is a ♂ just starting to molt into the gorgeous adult plumage. No others of the species were seen.

Family ICTERIDAE. Orioles, etc.

*LEISTES MILITARIS MILITARIS* (Linné)

*Leistes militaris* Todd and Carriker.

Red-breasted Blackbirds were seen only in an area of short grass and scattered bushes on the edge of the Cienaga fresh swamps. A flock of fifteen or twenty individuals, from which a pair was collected, was discovered there on November 10. It included at least three adult males, one of which was singing a low, reedy song something like that of the Red-winged Blackbird (*Agelaius phoeniceus*) but not so loud and clear. On November 17 there were at least five adult males and many dull colored birds at the same place, and a small flock was seen again November 22, while a single adult ♂ was noted from the train window March 26.

182. *AGELAIUS ICTEROCEPHALUS ICTEROCEPHALUS* (Linné)

Yellow-headed Blackbirds are abundant in the fresh swamps at Cienaga and Aracataca, but only one or two were seen at Rio Frio. They do not seem to be associated with any special type of marsh vegetation, provided only the latter is rank and extensive. One specimen was taken, an adult ♂ from Cienaga, October 6.

183. *ICTERUS GALBULA* (Linné)

Although there have been very few previous records for the Baltimore Oriole from the Santa Marta region, the species is a fairly common winter resident. It is rather easily overlooked, however, for it is silent and is often found high up in the trees. It was recorded on the following occasions: about six, of which three were collected, seen in October and November near Rio Frio, the first bird being secured October 13. One ♂ and probably one ♀ noted feeding in company with *I. auricapillus* in forest near Rio Frio in early December. An adult ♂ seen from the train at Donjaca in late November. A molting ♂ collected February 14 in open woods near Rio Frio. An adult ♂ seen flying near Rio Frio February 23, and one seen at Aracataca on March 3. Three or four adult males seen near Rio Frio on March 7, and one March 10.

184. *ICTERUS MESOMELAS CARRIKERI* Todd

Carriker's Oriole is fairly common at Rio Frio, and several were noted near Aracataca on March 3, but the species was absent in many apparently suitable localities. The birds are usually seen in small groups in overgrown, swampy land, but they occasionally invade shade trees about towns. They are noisy scolders, but have a fine, typical oriole song too.

Two nests were found, both shallow structures for an oriole and placed only three or four yards above the ground. One was hung in a small tree on the edge of a Rio Frio swamp and the other in a small ornamental palm in the "patio" of our house at Rio Frio. The leaf margins of the palm raveled out into fibers which the orioles utilized both to attach and to construct their nest. The first nest was occupied in September; the young left the second just at the end of November.

185. *ICTERUS NIGROGULARIS NIGROGULARIS* (Hahn)

By far the most abundant oriole at Rio Frio. It is a conspicuous inhabitant of all sorts of semi-open places. The song and scolding notes are such as are usually found in the genus. This bird is probably responsible for the deep nests, like those of the Baltimore Oriole, which are frequently seen at the ends of the branches of tall trees.

186. *ICTERUS AURICAPILLUS* Cassin

A rather scarce and retiring bird as compared with the other resident species of the genus. It was, however, encountered near Rio Frio on

several occasions, sometimes in heavy forest and sometimes in rather open country.

#### ICTERUS SPURIUS (Linné)

A ♂ in dull plumage was secured February 27 in a grove of trees near Cienaga and an adult ♂ was taken near the Fundacion River west of Aracataca on March 2. On the afternoon of the same day a flock of at least eight birds, including three adult males, was observed in an overgrown fence row in the United Fruit Company's Aracataca "Prado."

#### CASSIDIX MEXICANUS ASSIMILIS (Sclater) <sup>1</sup>

*Megaquiscalus major assimilis* Todd and Carriker.

The Great-tailed Grackle is a common bird in the mangroves along the Cienaga Grande and in the open country around the fresh swamps at Cienaga, and is especially common in the outskirts of the towns of Cienaga and Santa Marta. It usually feeds on the ground in small flocks. The song is a loud, variable affair of a few wiry and not very musical notes.

#### MOLOTHRUS BONARIENSIS CABANISII Cassin

A flock of about ten Cowbirds was discovered in the cactus scrub at Sevillano October 13. The birds were rather shy, but several could easily have been secured in addition to the single one (sex not determined) taken. A flock of four or more individuals was seen in bushes on the United Fruit Company's "Prado" in Santa Marta on January 7, when one was heard to sing a few squeaky but musical notes. My only other record is of a few seen about cows in a pasture west of Aracataca on March 2.

#### 187. PSOMOCOLAX ORYZIVORUS VIOLEUS (Bangs) <sup>2</sup>

*Cassidix oryzivora violea* Todd and Carriker.

The Rice Grackle is only occasionally found near Rio Frio. It usually goes in small flocks and was once noted with a flock of *Ostinops*, with which it sometimes roosts in the bamboos. It is typically a bird of the drier, open country, usually seen in scattered trees. On January 18, a flock of fifteen or twenty birds was observed in which one individual stood out uniquely on account of its large size. It was collected and

<sup>1</sup> Cf. J. L. Peters, Proc. Biol. Soc. Washington, **42**, 1929, p. 121.

<sup>2</sup> Cf. *ibid.*



proved to be an adult ♂, but whether the observation indicates that males are disproportionately scarce I do not know.

188. *OSTINOPS DECUMANUS MELANTERUS* Todd

This *Ostinops* is an abundant and unmistakable species near Rio Frio, although nesting trees were seen only in the edge of the foothills. The nest is, of course, a very deep bag, of which several are built in a single tree. The birds feed in flocks in forest, semi-open, and even banana lots, often in company with the big *Cyanocorax* jay, and may sometimes be seen feeding on the ground. They have a great variety of notes, one of the most characteristic of which resembles the creaking of bamboo or the strident sound produced by the rubbing of two branches in a wind. Scores and sometimes hundreds of these huge, yellow-tailed orioles roosted regularly in a dense clump of bamboo just opposite our house. They approached the roost singly or in flocks (between 5.08 and 5.30 when timed on December 25) and were at first very noisy, but they never bothered us much after dark. They are called "Oropéndulo" locally.

Family THRAUPIDAE. Tanagers

189. *EUCOMETIS CRISTATA CRISTATA* (Du Bus)

The Gray-crested Tanager is strictly confined to the underbrush of forest, where it is usually found in "family" groups. Like most of the other species of similar habits, it is scarce near Rio Frio, for there is comparatively little heavy forest left there. The bird has a sharp, loud alarm note.

190. *RAMPHOCELUS DIMIDIATUS DIMIDIATUS* Lafresnaye

Bushy fields, abandoned areas of brush, and sometimes low, open forest are all inhabited by the striking "Sángre Tóro." The birds are usually found in "families" in bushes or low trees, are active and hard to approach, and have a sharp alarm note which they give continually. Although the species is common, I did not hear it sing.

191. *PIRANGA RUBRA RUBRA* (Linné)

The Summer Tanager was first seen November 11, when an adult ♂ was collected near Rio Frio. It was fairly common in open forest and scattered trees near the town during the rest of the winter, or at least until I left the region in April.

192. *THRAUPIS PALMARUM ATRIPENNIS* Todd

A single Palm Tanager was collected near Rio Frio in low forest in company with *Dacnis coerebicolor napaea* on September 9, and one was seen in a grove of Wine Palms at Aracataca on March 3.

193. *THRAUPIS EPISCOPUS CANA* (Swainson)

Small flocks of the Blue Tanager are abundant in semi-open localities and open forest near Rio Frio, and are commonly encountered, too, in the shade trees of Santa Marta, so that the bird is one of the species which the visitor is sure to see. The flocks sometimes descend to the ground to feed about rotting bananas, but they are more at home in the trees and are especially partial to the "Guarúmo" or *Cecropia*.

194. *TANAGRA CRASSIROSTRIS* (Sclater)

*T. crassirostris* occurs in largish flocks, sometimes of two or three dozen birds, in low, scrubby woodland. It has a good warbled or trilled song, more erratic and more broken than the canary's. It is a favorite local cage bird and is trapped by boys, who locate the tree in which a flock is feeding and hang out traps containing live decoys. The species is probably also taken with bird lime, for the Colombians get a very good lime from the gum of a tree.

195. *TANAGRA TRINITATIS* (Strickland)

This little tanager is usually seen in pairs or small flocks in the trees in bushy forest. It is much less common than *T. crassirostris*. During the fall a flock of probably more than a dozen birds roosted regularly in the leafy lower branches of a large, isolated tree in a Rio Frio pasture.

## Family FRINGILLIDAE. Finches

196. *SALTATOR STRIATIPICTUS STRIATIPICTUS* Lafresnaye

All previous local records for *S. striatipictus* are from the northern foothills of the San Lorenzo, but the bird proves to be a common inhabitant of open forest and second-growth at Rio Frio. The song is much like that of *S. olivascens plumbeus*. The present species is more retiring than the latter and is more commonly found in woodland, but the habitats of the two overlap widely. Both are tree feeders, rarely or never seen on the ground. A single adult ♂ of *striatipictus* was collected, September 16, in the edge of the Rio Frio foothills.

197. *SALTATOR OLIVASCENS PLUMBEUS* Bonaparte

Common in open forest, bushy abandoned land, shade trees, etc., at Rio Frio and Santa Marta. The species has a short, sweet, warbled song, rather deliberately given.

198. *HEDYMELES LUDOVICIANUS* (Linné)

Rose-breasted Grosbeaks were first seen near Rio Frio November 11, when one (sex not determined) was secured, and were met with thereafter from time to time until March 7. They frequent open woodland and scattered trees very much as they do in the North. I did not hear them sing.

199. *CYANOCOMPSA CYANOIDES CYANOIDES* (Lafresnaye)

Only two individuals of the Panama Blue Grosbeak were seen. A ♂ was secured in the underbrush of heavy forest near Rio Frio September 2, and a ♀ was taken October 14 in similar cover. The ♂ sang a very sweet, warbled song, so low that it was scarcely audible fifteen yards away. The ♀ advertised its presence by chirping loudly.

200. *SPOROPHILA GUTTURALIS* (Lichtenstein)

Common in small flocks, usually in bushy abandoned land. The birds feed on the ground but are often seen resting in trees.

201. *SPOROPHILA MINUTA MINUTA* (Linné)

This small finch is abundant in grassy fields near Rio Frio. In February, March, and April the birds congregate in flocks of fifty to a hundred or more and feed progressively through the banana lots and fields.

202. *SPOROPHILA INTERMEDIA* Cabanis

*Sporophila grisea* Todd and Carriker.

Two were seen and one of them, an adult ♂, collected south of Rio Frio, October 27, in a bushy field. No others were ever surely identified.

203. *SPOROPHILA LINEOLA RESTRICTA* Todd

An adult ♂ shot July 5 at Rio Frio seems to be the first bird of this species to be recorded from the Santa Marta region, unless the specimen collected April 5, 1879, at Santa Marta by Simons (see *Sporophila*

sp., Todd and Carriker, p. 516) is the same thing. Birds of this species are fairly common in pairs or small flocks in the bushy abandoned land and semi-open about Rio Frio. The male has a quick, warbled song; the alarm note is a chirp with a "catty" quality. In its habits the species seems to be a typical *Sporophila*, feeding on the ground and in grass but sometimes resting in low trees.

#### 204. VOLATINIA JACARINI ATRONITENS Todd

The *Volatinia* is abundant in grass lands and semi-open from Rio Frio up to at least 1,500 feet in the foothills. The male sings a wiry little song and, as he does so, pops a foot or two into the air and drops back to his perch, which is usually on an exposed twig in a low bush. Many individuals molting into the black plumage of the adult male were seen in February.

#### 205. SICALIS FLAVEOLA FLAVEOLA (Linné)

The conspicuous yellow *Sicalis* is common in pairs in the semi-arid area from Sevillano to Santa Marta. It is to be seen feeding on the ground and resting in trees, in the cactus as well as the acacia thickets, and is common, too, in dry pastures and yards. Near Rio Frio it was noted only in early April, although birds were seen south of the town, near Orihueca, March 3 and late in March. I have no records for the species outside of the semi-arid area at any other season, and suspect that the individuals noted above, at and south of Rio Frio, were local migrants from a few miles north. My only specimen is an adult ♂ secured at Cienaga on November 11.

#### 206. ARREMON SCHLEGELI Bonaparte

Not a single individual of *Arremon schlegeli* was seen on the coastal plain proper, although the bird is common just within the edge of the foothills east of Rio Frio. It usually feeds in pairs on the ground in forest underbrush, and is so tame that it may be approached very closely.

#### 207. ARREMONOPS CONIROSTRIS CONIROSTRIS Bonaparte

This large sparrow is usually found in pairs on the ground in abandoned land and other bushy places, but not, as a rule, in grass. It is rather shy and will often hide rather than fly. The male has a good song of several clear notes, rather deliberate for a sparrow, and the species can scold loudly. It is fairly common near Rio Frio.

208. *SPIZA AMERICANA* (Gmelin)

Dickcissels are winter visitors of rather irregular occurrence. They were noted occasionally in fairly large flocks from October 1 to April 7, except that none was seen during December, January, and the first half of February. The species seemed commonest at Rio Frio, where an adult ♂ was secured October 1, but was noted also at Cienaga in February and on March 9. In both places its favorite haunts were in grassy fields which had been partly overgrown by bushes. The flocks fed on the ground, often rested in exposed shrubbery, and were surprisingly shy.